

## JRC TECHNICAL REPORTS

# GECO 2016 GHG and energy balances

*Supplementary material to:  
GECO 2016  
Global Energy and Climate Outlook  
Road From Paris*

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## 1. Introduction

This document complements the GECO2016 report (Kitous et al, 2016). It provides the detailed GHG and energy balances for the following three scenarios described in the main report:

- the Reference scenario,
- the INDC scenario,
- the 2°C scenario.

The results displayed in the main report and in the supplementary material have been produced with the global energy and GHG model JRC-POLES.

## 2. Energy and GHG balances

The tables provide for each country or region:

- the main economic indicators: population, income per capita, share of sectoral value added;
- the international energy prices;
- emissions per greenhouse gas (GHG) and per sector;
- a reduced energy balance: primary energy production, net trade of energy, primary energy demand by fuel and by sector;
- power generation: inputs<sup>1</sup>, production, capacities;
- final energy consumption per sector and per fuel.

## 3. Scenarios

The following scenarios are presented in this document:

- **Reference scenario:** Includes adopted policies for 2020 and assumed to be in place by then; thereafter, emissions are driven by income growth, energy prices and expected technological evolution with no supplementary incentivizing of low-carbon technologies. GHG emissions continue to grow at a decelerated pace but reach no peak by 2050. In the particular case of the EU28, the GECO2016 scenario has been derived starting from the EU "Trends to 2050 – Reference scenario 2013" (EC, 2013). Although it follows a similar trajectory for total GHG and CO<sub>2</sub> emissions by 2050, it can differ in terms of sectoral distribution. *As such, the EU28 results of the GECO2016 Reference should not be considered or used as an official European Commission projection of energy and GHG emissions for the European Union.*

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<sup>1</sup> Primary energy from nuclear and geothermal is calculated considering the primary heat equivalent of the electricity produced: it considers an average efficiency of 33% for nuclear and of 10% for geothermal.

- **INDC scenario:** All INDCs are implemented, including all conditional contributions; countries where the Reference already lead to emissions at or lower than their INDCs, as well as countries with no INDCs, do not implement additional policies. Beyond 2030, regional carbon values increase, including for countries that previously had no climate policies, and progressively converge, at a speed that depends on their per capita income; on average, the world GHG intensity over 2030-2050 decreases at the same rate as for 2020-2030.
- **2°C scenario:** Assumes a rapid intensification of policies across several world countries from 2015, leading to a peak in emissions as early as 2020. A progressive convergence of underlying carbon values after 2030, depending on their per capita income, leads to a "below 2°C-compatible" emissions profile by 2050 (see the main GECO2016 report for elements on the emissions budget and the temperature rise).

## 4. Geographical coverage

In addition to the world aggregate, 39 countries and regions are reported:

**Table 1: JRC-POLES model regional detail**

Europe	CIS	America	Africa	Middle East	Asia	Pacific
EU28	Russia	Argentina	Egypt	Iran	China	Australia
Iceland	Ukraine	Brazil	Algeria & Libya	Saudi Arabia	India	Japan
Norway	Other CIS	Canada		Turkey	Indonesia	Korea (Rep.)
Switzerland		Chile	Morocco & Tunisia	Mediterranean Middle-East	Malaysia	New Zealand
Other Balkans		Mexico			South Africa	
			USA	Rest Sub-Saharan Africa		Rest South Asia
	Rest Central America	Rest South-East Asia				
	Rest South America					

A country mapping of regions is provided further below.

Energy consumption and related GHG emissions of international maritime and aviation bunkers are reported in the world aggregate, but not in the individual country and region balances.

## 5. Sectors definitions

### *Energy demand sectors*

Primary Energy Demand: total energy demand, sum of Energy for Power Generation, Other Energy Transformation & Losses and Total Final Consumption

Energy for Power Generation: covers energy for electricity and heat production

Other Energy Transformation & Losses: energy own use and losses of the energy transformation industry, excluding power and heat generation. Covers fossil fuel and uranium extraction, refining, transport and distribution (including gasworks); coal-, gas- and biomass-to-liquids production; hydrogen production; coke ovens. Also includes transfers and statistical differences.

Total Final Consumption: sum of energy consumption in Industry, Buildings, Agriculture, Transport

Industry: manufacturing industry, construction, mining; does not include energy transformation activities, includes non-energy uses of energy fuels. Consists of energy-intensive industries – Steel (iron and steel production; includes blast furnaces and coke final consumption), Non-Metallic Minerals and Chemicals (consumption for energy uses of chemicals and petrochemicals industry); Other Industry (energy uses in other manufacturing industry, construction, mining); and Non-Energy Use (non-energy uses of energy fuels in rubber and plastics and chemical feedstocks production).

Buildings: Residential and Services

Agriculture: energy consumed in agriculture, forestry and fishing activities

Transport: passenger and freight transport (including public transport and transport services); does not include transport of energy goods and related losses. Country and regional balances refer to domestic consumption, international air and maritime bunkers are included only in the global balance

Other Transport: waterways, maritime

### *Emissions*

Total GHG: all anthropogenic greenhouse gases emissions; cover the energy sector, industry, agriculture, land use, land use change and forestry (including sinks)

Total GHG (excl. sinks): all emissions excluding LULUCF sinks

Total GHG (energy, industry, agriculture): all emissions excluding LULUCF

CO<sub>2</sub>: emissions from energy and industrial processes

CH<sub>4</sub>: emissions from energy, industry and agriculture

N<sub>2</sub>O: emissions from energy, industry and agriculture

F gases: SF<sub>6</sub>, HFCs, PFCs from energy and industry

Total GHG from Energy and Industry: all emissions excluding agriculture and LULUCF

CO<sub>2</sub> Emissions from Fuel Comb.: CO<sub>2</sub> only related to energy combustion (excluding process emissions); sectoral emissions refer to the sectors definition of energy demand (see above)

CO<sub>2</sub> captured (CCS): CO<sub>2</sub> captured and stored coming from power generation (coal, gas or biomass combustion), liquids production (coal, gas or solid biomass conversion), hydrogen production (coal, gas or biomass combustion) and industry (coal or biomass combustion)

Emissions from the different gases are converted into CO<sub>2</sub>-equivalent values, using the 100-year global warming potentials of the IPCC Second Assessment Report (see Table 4 of the Technical Summary of IPCC (1996)).

## **6. Data**

Table 2 below lists the data used in the modelling:

- Historical data
- Exogenous inputs used in the projections

Modelled outputs are signalled as "JRC-POLES model".

**Table 2: JRC-POLES model historical data and projections**

Series		Historical data	GECO Projections
Population		UN (2015)	UN (2015, medium fertility)
GDP, growth		World Bank (2015)	EC (2015), IMF (2016), OECD (2013, see also Dellink et al. 2014)
Other activity drivers	Value added	World Bank (2015)	JRC-POLES model
	Mobility, households, vehicles, tons of steel..	Sectoral databases	
Energy resources	Oil, gas, coal	BGR (2014), USGS (2013), WEC (2013a), sectoral databases	
	Uranium	OECD (2014)	
	Biomass	EU: Green-X model <sup>1</sup> Non-EU: GLOBIOM model <sup>2</sup>	
	Hydro	Enerdata (2015)	
	Wind, solar	NREL (2013), Pietzcker (2014)	
Energy balances	Reserves, production	BP (2015), Enerdata (2015), IEA (2015)	
	Demand by sector and fuel, transformation (including. power), losses	Enerdata (2015), IEA (2016)	
Energy prices	International prices, prices to consumer	EIA (2016), Enerdata (2015), IEA (2015)	JRC-POLES model
GHG emissions	Energy CO2	Derived from JRC-POLES energy balances	JRC-POLES model
	Other GHG Annex 1	UNFCCC (2015)	JRC-POLES model, GLOBIOM <sup>2</sup>
	Other GHG Non-Annex 1 (excl. LULUCF)	EDGAR (EC JRC 2015)	JRC-POLES model, GLOBIOM <sup>2</sup>
	LULUCF Non-Annex 1	FAO (2015)	JRC-POLES model, GLOBIOM <sup>2</sup>
Technology costs		JRC-POLES learning curves based on literature, including but not only: EC JRC (2014), IEA Technology Roadmaps, WEC (2013b), TECHPOL database <sup>3</sup>	

**Notes:**

1: University of Vienna: <http://www.green-x.at/>

2: IIASA: <http://www.globiom.org/>

3: developed in several European research projects: SAPIENT, SAPIENTIA, CASCADE MINTS - see for instance: [http://cordis.europa.eu/result/rcn/47819\\_en.html](http://cordis.europa.eu/result/rcn/47819_en.html)



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## List of abbreviations and definitions

### ***Acronyms & Abbreviations***

BGR: German Federal Institute for Geosciences and Natural Resources (Bundesanstalt für Geowissenschaften und Rohstoffe)

CCS: Carbon Capture and Sequestration

DOE: US Department Of Energy

EC: European Commission

EIA: US Energy Information Administration

GDP: Gross Domestic Product

GECO: Global Energy & Climate Outlook

GHG: Greenhouse Gases

IEA: International Energy Agency

IIASA: International Institute for Applied Statistical Analysis

IMF: International Monetary Fund

INDC: Intended Nationally Determined Contribution

JRC: European Commission Joint Research Centre

LULUCF: Land Use, Land Use Change and Forestry

MER: Market Exchange Rate

OECD: Organisation of Economic Co-operation and Development

PPP: Purchasing Power Parity

RCP: Representative Concentration Pathway

UN: United Nations

UNFCCC: United Nations Framework Convention on Climate Change

USGS: US Geological Survey

### ***Country and regional codes***

CIS: Commonwealth of Independent States

EU28: European Union

Mediterranean Middle-East: Israel, Jordan, Lebanon, Palestine, Syria

Other Balkans: Albania, Bosnia-Herzegovina, Kosovo, Macedonia, Montenegro, Serbia

Other CIS: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyz Rep., Moldova, Tajikistan, Turkmenistan, Uzbekistan

Rest Central America: Bahamas, Barbados, Belize, Bermuda, Costa Rica, Cuba, Dominica, Dominican Republic, El Salvador, Grenada, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, NL Antilles and Aruba, Panama, St Lucia, St Vincent and Grenadines, Trinidad and Tobago

Rest Gulf: Bahrain, Iraq, Kuwait, Oman, Qatar, United Arab Emirates, Yemen

Rest Pacific: Fiji Islands, Kiribati, Papua New Guinea, Samoa (Western), Solomon Islands, Tonga, Vanuatu

Rest South America: Bolivia, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela

Rest South Asia: Afghanistan, Bangladesh, Bhutan, Maldives, Nepal, Pakistan, Sri Lanka

Rest South-East Asia: Brunei, Cambodia, Hong-Kong, Lao PDR, Macau, Mongolia, Myanmar, Korea (PR), Philippines, Singapore, Taiwan

Rest Sub-Saharan Africa: Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, Congo DR, Cote d'Ivoire, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Seychelles, Senegal, Sierra Leone, Somalia, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe

## **Units**

### **Energy**

Mtoe	million tonnes of oil equivalent	1000 000 toe
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### **Electricity**

GW	gigawatts	1000 000 000 W
TWh	terawatt-hours	1000 000 000 000 Wh

### **Prices**

\$/boe	\$ per barrel of oil equivalent
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### **Emissions**

MtCO <sub>2</sub> e	million tonnes of CO <sub>2</sub> equivalent	1000 000 tCO <sub>2</sub> e
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### **Monetary units**

k\$	thousand dollars	1000 \$
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Values are given in US dollars of 2005.

World	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	5 308	6 126	6 930	7 762	8 509	9 174	9 750	1.4%	1.2%	1.1%	0.9%	0.8%	0.6%
GDP per capita (ppp, k\$'05)	7	8	10	12	15	20	24	1.5%	2.2%	2.1%	2.6%	2.3%	1.9%
GDP per capita (mer, k\$'05)	6	7	8	9	10	12	14	1.3%	1.3%	1.4%	1.8%	1.8%	1.6%
Share Value Added - Agriculture (%)	8	5	5	5	5	6	6	-3.5%	0.1%	0.0%	0.1%	0.1%	0.1%
Share Value Added - Industry (%)	33	30	30	31	30	27	25	-1.0%	0.1%	0.1%	-0.4%	-0.8%	-0.9%
Share Value Added - Services (%)	59	65	64	64	65	67	69	0.9%	-0.1%	0.0%	0.2%	0.3%	0.3%
<b>Prices</b>													
<b>International (\$'05/boe)</b>													
Coal	16	8	19	15	18	21	24	-6.8%	8.9%	-2.1%	1.7%	1.8%	1.1%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	19	23	32	35	47	68	93	2.3%	3.2%	0.8%	3.1%	3.7%	3.2%
<b>GHG emissions (MtCO<sub>2</sub> eq.)</b>													
Total GHG	33 853	36 187	45 396	53 309	61 270	68 362	71 471	0.7%	2.3%	1.6%	1.4%	1.1%	0.4%
Total GHG (excl. sinks)	36 248	39 232	48 277	55 619	63 095	69 973	73 566	0.8%	2.1%	1.4%	1.3%	1.0%	0.5%
Total GHG (energy, industry, agriculture)	31 878	34 490	44 357	51 986	59 449	65 885	69 442	0.8%	2.5%	1.6%	1.4%	1.0%	0.5%
CO <sub>2</sub>	22 847	25 496	33 742	40 182	46 501	51 852	54 721	1.1%	2.8%	1.8%	1.5%	1.1%	0.5%
CH <sub>4</sub>	5 981	6 044	7 182	7 907	8 620	9 287	9 685	0.1%	1.7%	1.0%	0.9%	0.7%	0.4%
N <sub>2</sub> O	2 747	2 564	2 867	3 126	3 383	3 599	3 736	-0.7%	1.1%	0.9%	0.8%	0.6%	0.4%
F gases	304	386	566	772	944	1 148	1 300	2.4%	3.9%	3.1%	2.0%	2.0%	1.3%
Total GHG from Energy and Industry	26 933	29 688	39 011	46 188	53 167	59 235	62 530	1.0%	2.8%	1.7%	1.4%	1.1%	0.5%
CO <sub>2</sub> Emissions from Fuel Comb.	21 415	23 790	31 110	36 558	42 015	46 828	49 546	1.1%	2.7%	1.6%	1.4%	1.1%	0.6%
Power generation/District heating	6 848	8 416	11 647	13 189	16 194	19 435	21 876	2.1%	3.3%	1.3%	2.1%	1.8%	1.2%
Industry	4 272	4 299	6 345	7 774	8 838	8 959	8 471	0.1%	4.0%	2.1%	1.3%	0.1%	-0.6%
Buildings	2 975	2 752	2 969	3 040	3 217	3 385	3 347	-0.8%	0.8%	0.2%	0.6%	0.5%	-0.1%
Agriculture	427	362	425	472	518	561	599	-1.6%	1.6%	1.0%	0.9%	0.8%	0.7%
Transport	4 662	5 756	6 942	8 533	9 072	9 808	10 269	2.1%	1.9%	2.1%	0.6%	0.8%	0.5%
Other	2 230	2 205	2 781	3 550	4 176	4 679	4 985	-0.1%	2.3%	2.5%	1.6%	1.1%	0.6%
CO <sub>2</sub> captured (CCS)	0	0	0	1	13	67	370	n.s.	n.s.	n.s.	30.3%	17.6%	18.6%
Coal	0	0	0	1	11	54	285	n.s.	n.s.	n.s.	32.0%	17.7%	18.0%
Gas	0	0	0	0	1	10	46	n.s.	n.s.	n.s.	32.3%	22.3%	16.5%
Biomass	0	0	0	0	1	3	39	n.s.	n.s.	n.s.	20.5%	8.4%	30.0%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	8 907	10 162	13 072	15 528	18 211	20 562	22 086	1.3%	2.6%	1.7%	1.6%	1.2%	0.7%
Coal	2 310	2 454	3 767	4 497	5 310	5 968	6 526	0.6%	4.4%	1.8%	1.7%	1.2%	0.9%
Oil	3 286	3 709	4 191	4 861	5 050	5 232	5 211	1.2%	1.2%	1.5%	0.4%	0.4%	0.0%
Natural gas	1 690	2 072	2 740	3 239	4 102	4 816	5 118	2.1%	2.8%	1.7%	2.4%	1.6%	0.6%
Biomass	866	957	1 233	1 401	1 695	1 942	2 171	1.0%	2.6%	1.3%	1.9%	1.4%	1.1%
Nuclear <sup>1</sup>	533	686	728	766	941	1 153	1 232	2.6%	0.6%	0.5%	2.1%	2.1%	0.7%
Hydro	188	232	303	377	439	457	472	2.1%	2.7%	2.2%	1.5%	0.4%	0.3%
Other renewables	34	52	110	388	675	994	1 357	4.5%	7.7%	13.4%	5.7%	3.9%	3.2%
International Bunkers	236	319	418	560	703	840	977	3.0%	2.7%	3.0%	2.3%	1.8%	1.5%
Maritime Bunkers	151	202	266	365	460	540	619	2.9%	2.8%	3.2%	2.3%	1.6%	1.4%
Aviation Bunkers	85	117	152	195	243	301	358	3.2%	2.7%	2.6%	2.2%	2.2%	1.8%
Oil	85	117	152	194	239	293	345	3.2%	2.7%	2.5%	2.1%	2.1%	1.7%
Biofuels	0	0	0	1	4	8	13	n.s.	n.s.	n.s.	15.9%	6.5%	5.1%
Regional Energy Demand (excl. bunkers)	8 670	9 843	12 654	14 968	17 508	19 722	21 109	1.3%	2.5%	1.7%	1.6%	1.2%	0.7%
Coal	2 310	2 454	3 767	4 497	5 310	5 968	6 526	0.6%	4.4%	1.8%	1.7%	1.2%	0.9%
Oil	3 050	3 390	3 773	4 302	4 352	4 400	4 247	1.1%	1.1%	1.3%	0.1%	0.1%	-0.4%
Natural gas	1 690	2 072	2 740	3 239	4 102	4 816	5 118	2.1%	2.8%	1.7%	2.4%	1.6%	0.6%
Biomass	866	957	1 233	1 400	1 690	1 934	2 157	1.0%	2.6%	1.3%	1.9%	1.4%	1.1%
Nuclear <sup>1</sup>	533	686	728	766	941	1 153	1 232	2.6%	0.6%	0.5%	2.1%	2.1%	0.7%
Hydro	188	232	303	377	439	457	472	2.1%	2.7%	2.2%	1.5%	0.4%	0.3%
Other renewables	34	52	110	388	675	994	1 357	4.5%	7.7%	13.4%	5.7%	3.9%	3.2%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	8 907	10 162	13 072	15 528	18 211	20 562	22 086	1.3%	2.6%	1.7%	1.6%	1.2%	0.7%
Energy for Power Generation	2 794	3 462	4 659	5 531	7 015	8 551	9 839	2.2%	3.0%	1.7%	2.4%	2.0%	1.4%
Other Energy Transformation & Losses	883	875	1 220	1 506	1 891	2 177	2 394	-0.1%	3.4%	2.1%	2.3%	1.4%	1.0%
Final consumption (incl. bunkers)	6 406	7 177	9 075	10 887	12 460	13 802	14 575	1.1%	2.4%	1.8%	1.4%	1.0%	0.5%
Steel, Non-Met. Minerals and Chem.	834	930	1 400	1 799	2 076	2 054	1 909	1.1%	4.2%	2.5%	1.4%	-0.1%	-0.7%
Other Industry	1 118	1 076	1 351	1 731	2 145	2 493	2 667	-0.4%	2.3%	2.5%	2.2%	1.5%	0.7%
Non-Energy Use	492	636	828	958	1 054	1 137	1 148	2.6%	2.7%	1.5%	1.0%	0.8%	0.1%
Residential	1 635	1 794	2 047	2 184	2 306	2 434	2 480	0.9%	1.3%	0.6%	0.5%	0.5%	0.2%
Services	595	635	830	985	1 243	1 568	1 870	0.6%	2.7%	1.7%	2.4%	2.4%	1.8%
Agriculture	169	147	179	209	237	264	289	-1.3%	2.0%	1.6%	1.3%	1.1%	0.9%
Road	1 132	1 441	1 824	2 198	2 369	2 628	2 809	2.4%	2.4%	1.9%	0.8%	1.0%	0.7%
Rail	60	48	52	62	70	80	88	-2.3%	0.8%	1.8%	1.3%	1.2%	1.0%
Aviation	181	225	251	328	409	499	583	2.2%	1.1%	2.7%	2.2%	2.0%	1.6%
Other Transport	190	244	314	434	550	645	732	2.5%	2.6%	3.3%	2.4%	1.6%	1.3%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

World	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>2 043</b>	<b>2 496</b>	<b>3 524</b>	<b>4 013</b>	<b>4 981</b>	<b>5 969</b>	<b>6 803</b>	<b>2.0%</b>	<b>3.5%</b>	<b>1.3%</b>	<b>2.2%</b>	<b>1.8%</b>	<b>1.3%</b>
Coal	1 172	1 504	2 129	2 488	3 051	3 743	4 348	2.5%	3.5%	1.6%	2.1%	2.1%	1.5%
Oil	335	290	246	214	237	239	253	-1.4%	-1.7%	-1.4%	1.0%	0.1%	0.6%
Gas	480	646	1 023	1 115	1 411	1 633	1 738	3.0%	4.7%	0.9%	2.4%	1.5%	0.6%
Biomass & Waste	53	52	120	183	262	332	439	-0.2%	8.7%	4.3%	3.7%	2.4%	2.8%
Other	3	4	6	13	20	22	25	3.6%	2.8%	8.3%	4.3%	1.2%	1.2%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>11 845</b>	<b>15 472</b>	<b>21 554</b>	<b>27 930</b>	<b>36 794</b>	<b>45 904</b>	<b>53 943</b>	<b>2.7%</b>	<b>3.4%</b>	<b>2.6%</b>	<b>2.8%</b>	<b>2.2%</b>	<b>1.6%</b>
Coal	4 423	5 999	8 661	10 886	13 824	17 278	20 211	3.1%	3.7%	2.3%	2.4%	2.3%	1.6%
of which CCS	0	0	0	0	0	41	311	n.s.	n.s.	n.s.	n.s.	n.s.	22.5%
Oil	1 292	1 178	931	907	1 011	1 032	1 112	-0.9%	-2.3%	-0.3%	1.1%	0.2%	0.7%
Gas	1 762	2 753	4 811	5 569	7 315	8 721	9 503	4.6%	5.7%	1.5%	2.8%	1.8%	0.9%
of which CCS	0	0	0	0	0	22	120	n.s.	n.s.	n.s.	n.s.	n.s.	18.6%
Biomass & Waste	123	169	380	620	961	1 345	1 945	3.2%	8.4%	5.0%	4.5%	3.4%	3.8%
of which CCS	0	0	0	0	0	0	31	n.s.	n.s.	n.s.	n.s.	n.s.	52.0%
Nuclear	2 013	2 591	2 756	2 925	3 645	4 560	4 951	2.6%	0.6%	0.6%	2.2%	2.3%	0.8%
Hydro	2 191	2 697	3 529	4 387	5 102	5 318	5 491	2.1%	2.7%	2.2%	1.5%	0.4%	0.3%
Wind	4	31	368	1 836	3 295	5 050	6 782	23.2%	27.9%	17.4%	6.0%	4.4%	3.0%
Solar	1	1	49	628	1 344	2 205	3 386	7.5%	41.8%	29.2%	7.9%	5.1%	4.4%
Other	36	52	68	173	296	394	561	3.6%	2.8%	9.7%	5.5%	2.9%	3.6%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>2 962</b>	<b>3 588</b>	<b>5 162</b>	<b>7 294</b>	<b>9 551</b>	<b>11 849</b>	<b>13 994</b>	<b>1.9%</b>	<b>3.7%</b>	<b>3.5%</b>	<b>2.7%</b>	<b>2.2%</b>	<b>1.7%</b>
Coal	894	1 142	1 702	2 128	2 675	3 172	3 695	2.5%	4.1%	2.3%	2.3%	1.7%	1.5%
of which CCS	0	0	0	0	0	6	43	n.s.	n.s.	n.s.	n.s.	n.s.	21.5%
Oil	630	496	413	424	412	406	429	-2.4%	-1.8%	0.3%	-0.3%	-0.1%	0.5%
Gas	548	742	1 313	1 611	1 872	2 135	2 126	3.1%	5.9%	2.1%	1.5%	1.3%	0.0%
of which CCS	0	0	0	0	0	3	15	n.s.	n.s.	n.s.	n.s.	n.s.	18.0%
Biomass & Waste	27	45	99	151	204	268	339	5.1%	8.2%	4.3%	3.0%	2.8%	2.4%
of which CCS	0	0	0	0	0	0	5	n.s.	n.s.	n.s.	n.s.	n.s.	49.5%
Nuclear	290	355	377	400	492	608	652	2.1%	0.6%	0.6%	2.1%	2.1%	0.7%
Hydro	564	782	1 020	1 273	1 451	1 508	1 557	3.3%	2.7%	2.2%	1.3%	0.4%	0.3%
Wind	2	17	184	805	1 422	2 137	2 803	23.8%	27.0%	15.9%	5.9%	4.2%	2.8%
Solar	1	2	43	472	969	1 539	2 288	6.7%	39.1%	27.2%	7.4%	4.7%	4.0%
Other	6	8	10	29	56	75	105	3.6%	2.2%	11.2%	6.6%	3.1%	3.4%
<b>Total Final Consumption (Mtoe)</b>	<b>6 406</b>	<b>7 177</b>	<b>9 075</b>	<b>10 887</b>	<b>12 460</b>	<b>13 802</b>	<b>14 575</b>	<b>1.1%</b>	<b>2.4%</b>	<b>1.8%</b>	<b>1.4%</b>	<b>1.0%</b>	<b>0.5%</b>
Coal	899	704	1 244	1 454	1 596	1 520	1 428	-2.4%	5.8%	1.6%	0.9%	-0.5%	-0.6%
Oil	2 635	3 163	3 668	4 357	4 531	4 720	4 712	1.8%	1.5%	1.7%	0.4%	0.4%	0.0%
Gas	897	1 074	1 277	1 589	2 023	2 401	2 540	1.8%	1.8%	2.2%	2.4%	1.7%	0.6%
Electricity	831	1 086	1 531	1 992	2 623	3 271	3 847	2.7%	3.5%	2.7%	2.8%	2.2%	1.6%
Heat	339	256	293	326	375	457	541	-2.8%	1.4%	1.1%	1.4%	2.0%	1.7%
Biomass & Other	807	895	1 062	1 169	1 312	1 432	1 507	1.0%	1.7%	1.0%	1.2%	0.9%	0.5%
Share of Renewables <sup>2</sup> (%)	17%	18%	18%	19%	20%	22%	24%	0.3%	0.0%	0.6%	0.7%	0.7%	0.9%
<b>Industry (incl. non-energy use)</b>	<b>2 443</b>	<b>2 643</b>	<b>3 578</b>	<b>4 487</b>	<b>5 275</b>	<b>5 684</b>	<b>5 723</b>	<b>0.8%</b>	<b>3.1%</b>	<b>2.3%</b>	<b>1.6%</b>	<b>0.7%</b>	<b>0.1%</b>
Coal	629	584	1 089	1 316	1 474	1 410	1 332	-0.7%	6.4%	1.9%	1.1%	-0.4%	-0.6%
Oil	685	798	918	1 042	1 043	1 003	893	1.5%	1.4%	1.3%	0.0%	-0.4%	-1.2%
Gas	454	533	623	883	1 163	1 390	1 432	1.6%	1.6%	3.5%	2.8%	1.8%	0.3%
Electricity	381	460	637	899	1 191	1 414	1 561	1.9%	3.3%	3.5%	2.9%	1.7%	1.0%
Heat	163	105	125	135	146	154	158	-4.3%	1.8%	0.8%	0.8%	0.6%	0.3%
Biomass & Other	133	163	185	213	259	312	347	2.0%	1.3%	1.4%	2.0%	1.9%	1.1%
<b>Buildings</b>	<b>2 230</b>	<b>2 429</b>	<b>2 877</b>	<b>3 169</b>	<b>3 549</b>	<b>4 002</b>	<b>4 350</b>	<b>0.9%</b>	<b>1.7%</b>	<b>1.0%</b>	<b>1.1%</b>	<b>1.2%</b>	<b>0.8%</b>
Coal	242	108	139	123	108	97	85	-7.8%	2.5%	-1.2%	-1.3%	-1.0%	-1.4%
Oil	316	341	307	322	324	322	301	0.8%	-1.0%	0.5%	0.1%	-0.1%	-0.7%
Gas	434	532	619	656	754	847	880	2.1%	1.5%	0.6%	1.4%	1.2%	0.4%
Electricity	403	581	834	1 006	1 246	1 562	1 886	3.7%	3.7%	1.9%	2.2%	2.3%	1.9%
Heat	176	151	168	191	229	303	382	-1.6%	1.1%	1.3%	1.9%	2.8%	2.4%
Biomass & Other	660	716	812	871	888	871	816	0.8%	1.3%	0.7%	0.2%	-0.2%	-0.7%
<b>Agriculture</b>	<b>169</b>	<b>147</b>	<b>179</b>	<b>209</b>	<b>237</b>	<b>264</b>	<b>289</b>	<b>-1.3%</b>	<b>2.0%</b>	<b>1.6%</b>	<b>1.3%</b>	<b>1.1%</b>	<b>0.9%</b>
Coal	15	8	13	13	12	11	10	-6.8%	5.6%	-0.1%	-1.0%	-1.0%	-0.9%
Oil	110	101	112	126	142	157	170	-0.9%	1.1%	1.2%	1.2%	1.0%	0.8%
Gas	7	6	7	8	9	10	10	-2.5%	2.9%	1.1%	0.7%	0.6%	0.5%
Electricity	30	29	39	53	66	78	90	-0.5%	3.2%	3.2%	2.1%	1.8%	1.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	6	5	7	8	8	9	10	-1.7%	3.9%	1.0%	0.8%	0.7%	0.6%
<b>Transport (incl. bunkers)</b>	<b>1 564</b>	<b>1 958</b>	<b>2 441</b>	<b>3 022</b>	<b>3 399</b>	<b>3 852</b>	<b>4 212</b>	<b>2.3%</b>	<b>2.2%</b>	<b>2.2%</b>	<b>1.2%</b>	<b>1.3%</b>	<b>0.9%</b>
Coal	13	5	3	3	2	2	1	-9.8%	-3.4%	-2.4%	-1.9%	-1.9%	-1.9%
Oil	1 524	1 923	2 331	2 867	3 021	3 239	3 349	2.4%	1.9%	2.1%	0.5%	0.7%	0.3%
Gas	2	3	28	42	98	154	218	5.2%	24.4%	4.2%	8.7%	4.7%	3.5%
Electricity	17	16	21	33	121	217	309	-0.7%	2.5%	5.0%	13.7%	6.0%	3.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	8	11	58	77	157	240	335	3.7%	18.1%	2.8%	7.4%	4.4%	3.4%
<b>Other Energy Transformation &amp; Losses<sup>3</sup></b>	<b>883</b>	<b>875</b>	<b>1 220</b>	<b>1 506</b>	<b>1 891</b>	<b>2 177</b>	<b>2 394</b>	<b>-0.1%</b>	<b>3.4%</b>	<b>2.1%</b>	<b>2.3%</b>	<b>1.4%</b>	<b>1.0%</b>

<sup>2</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>3</sup> includes statistical differences

EU28	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	476	487	503	513	519	524	525	0.2%	0.3%	0.2%	0.1%	0.1%	0.0%
GDP per capita (ppp, k\$'05)	20	25	28	30	34	39	45	1.9%	1.2%	0.8%	1.3%	1.4%	1.4%
GDP per capita (mer, k\$'05)	22	27	30	32	36	42	48	2.0%	1.1%	0.7%	1.2%	1.4%	1.5%
Share Value Added - Agriculture (%)	3	2	2	2	2	1	1	-5.0%	-1.2%	-0.7%	-0.4%	-0.5%	-0.5%
Share Value Added - Industry <sup>1</sup> (%)	34	28	25	25	24	23	21	-1.8%	-1.1%	-0.2%	-0.3%	-0.5%	-0.6%
Share Value Added - Services (%)	63	70	73	74	75	76	77	1.1%	0.5%	0.1%	0.1%	0.2%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	17	19	-6.5%	7.4%	-4.3%	1.2%	2.1%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	18	21	30	38	52	70	93	1.4%	3.8%	2.2%	3.3%	3.0%	2.9%
<b>GHG emissions (MtCO<sub>2</sub> eq.)</b>													
Total GHG	5 329	4 835	4 448	3 737	3 239	3 045	2 642	-1.0%	-0.8%	-1.7%	-1.4%	-0.6%	-1.4%
Total GHG (excl. sinks)	5 628	5 166	4 783	4 001	3 469	3 230	2 836	-0.9%	-0.8%	-1.8%	-1.4%	-0.7%	-1.3%
Total GHG (energy, industry, agriculture)	5 598	5 150	4 770	3 986	3 441	3 139	2 733	-0.8%	-0.8%	-1.8%	-1.5%	-0.9%	-1.4%
CO <sub>2</sub>	4 385	4 135	3 899	3 272	2 844	2 558	2 180	-0.6%	-0.6%	-1.7%	-1.4%	-1.1%	-1.6%
CH <sub>4</sub>	601	495	409	332	287	277	251	-1.9%	-1.9%	-2.0%	-1.5%	-0.4%	-1.0%
N <sub>2</sub> O	557	455	373	312	289	281	277	-2.0%	-2.0%	-1.8%	-0.8%	-0.3%	-0.2%
F gases	56	65	90	70	21	23	25	1.5%	3.3%	-2.5%	-11.2%	0.9%	0.8%
Total GHG from Energy and Industry	4 982	4 629	4 295	3 542	2 998	2 695	2 290	-0.7%	-0.7%	-1.9%	-1.7%	-1.1%	-1.6%
CO <sub>2</sub> Emissions from Fuel Comb.	4 139	3 897	3 691	3 078	2 669	2 395	2 030	-0.6%	-0.5%	-1.8%	-1.4%	-1.1%	-1.6%
Power generation/District heating	1 424	1 283	1 235	948	781	707	554	-1.0%	-0.4%	-2.6%	-1.9%	-1.0%	-2.4%
Industry	843	710	554	505	446	395	339	-1.7%	-2.5%	-0.9%	-1.2%	-1.2%	-1.5%
Buildings	724	652	660	490	485	478	447	-1.1%	0.1%	-2.9%	-0.1%	-0.1%	-0.7%
Agriculture	84	72	59	57	59	62	65	-1.5%	-2.0%	-0.4%	0.4%	0.5%	0.5%
Transport	764	900	925	846	689	566	470	1.7%	0.3%	-0.9%	-2.0%	-1.9%	-1.9%
Other	300	280	259	232	208	187	156	-0.7%	-0.8%	-1.1%	-1.1%	-1.1%	-1.8%
CO <sub>2</sub> captured (CCS)	0	0	0	1	11	52	309	n.s.	n.s.	n.s.	35.5%	17.2%	19.4%
Coal	0	0	0	0	9	42	236	n.s.	n.s.	n.s.	35.5%	16.7%	18.8%
Gas	0	0	0	0	1	8	41	n.s.	n.s.	n.s.	n.s.	24.1%	17.5%
Biomass	0	0	0	0	1	2	32	n.s.	n.s.	n.s.	25.8%	9.5%	32.7%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	933	965	855	780	783	842	884	0.3%	-1.2%	-0.9%	0.0%	0.7%	0.5%
Coal	357	241	177	131	94	88	87	-3.9%	-3.1%	-3.0%	-3.2%	-0.7%	-0.1%
Oil	136	178	101	68	52	39	29	2.7%	-5.5%	-3.9%	-2.5%	-2.9%	-2.8%
Natural gas	156	194	148	113	96	94	102	2.2%	-2.7%	-2.6%	-1.6%	-0.3%	0.9%
Biomass	44	63	130	169	202	215	235	3.7%	7.5%	2.6%	1.8%	0.6%	0.9%
Nuclear <sup>1</sup>	210	250	242	202	210	256	242	1.7%	-0.3%	-1.8%	0.4%	2.0%	-0.6%
Hydro	27	33	35	34	34	34	34	2.3%	0.5%	-0.2%	0.1%	-0.2%	0.0%
Other renewables	3	6	22	63	93	117	154	8.0%	13.0%	11.1%	4.0%	2.3%	2.7%
Net Imports	747	761	899	794	750	712	678						
Coal	125	108	123	130	85	62	76						
Oil	479	448	471	419	360	313	272						
Natural gas	139	202	300	227	286	305	289						
Biomass	0	0	2	16	14	23	32						
Biofuels	0	0	2	2	5	8	9						
Electricity	4	2	1	1	1	1	1						
Primary Energy Demand <sup>2</sup>	1 680	1 726	1 754	1 573	1 533	1 554	1 562	0.3%	0.2%	-1.1%	-0.3%	0.1%	0.0%
Coal	482	349	299	261	179	150	163	-3.2%	-1.5%	-1.4%	-3.7%	-1.8%	0.8%
Oil	615	626	572	486	412	353	301	0.2%	-0.9%	-1.6%	-1.6%	-1.6%	-1.6%
Natural gas	295	396	447	340	382	399	391	3.0%	1.2%	-2.7%	1.2%	0.4%	-0.2%
Biomass	44	63	133	185	216	237	267	3.7%	7.7%	3.4%	1.6%	1.0%	1.2%
Nuclear <sup>1</sup>	210	250	242	202	210	256	242	1.7%	-0.3%	-1.8%	0.4%	2.0%	-0.6%
Hydro	27	33	35	34	34	34	34	2.3%	0.5%	-0.2%	0.1%	-0.2%	0.0%
Other renewables	3	6	22	63	93	117	154	8.0%	13.0%	11.1%	4.0%	2.3%	2.7%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	1 680	1 726	1 754	1 573	1 533	1 554	1 562	0.3%	0.2%	-1.1%	-0.3%	0.1%	0.0%
Energy for Power Generation	635	674	722	645	684	762	832	0.6%	0.7%	-1.1%	0.6%	1.1%	0.9%
Other Energy Transformation & Losses	134	119	128	124	124	123	118	-1.2%	0.7%	-0.3%	0.0%	-0.2%	-0.4%
Final consumption	1 152	1 197	1 217	1 116	1 080	1 075	1 066	0.4%	0.2%	-0.9%	-0.3%	0.0%	-0.1%
Steel, Non-Met. Minerals and Chem.	190	165	139	132	114	100	90	-1.4%	-1.7%	-0.5%	-1.4%	-1.3%	-1.1%
Other Industry	175	163	145	142	144	150	155	-0.8%	-1.1%	-0.2%	0.2%	0.4%	0.3%
Non-Energy Use	100	113	108	100	92	89	85	1.2%	-0.4%	-0.8%	-0.8%	-0.4%	-0.5%
Residential	276	289	312	262	264	269	266	0.5%	0.8%	-1.7%	0.0%	0.2%	-0.1%
Services	118	133	166	150	162	181	199	1.3%	2.2%	-1.0%	0.8%	1.1%	0.9%
Agriculture	33	29	26	25	26	28	29	-1.4%	-1.1%	-0.3%	0.5%	0.6%	0.5%
Road	237	281	299	285	257	236	219	1.7%	0.6%	-0.5%	-1.0%	-0.8%	-0.8%
Rail	10	10	8	8	8	9	9	0.1%	-1.7%	-0.4%	0.5%	0.6%	0.6%
Aviation	6	7	7	7	7	8	9	2.4%	-0.4%	-0.8%	1.2%	1.3%	1.0%
Other Transport	7	6	6	5	5	5	5	-0.9%	-0.8%	-1.9%	0.3%	0.2%	0.1%

The EU28 results of the GECO2016 Reference should not be used as an official European Commission projection of energy and GHG emissions for the EU.

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%



EU28	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>395</b>	<b>385</b>	<b>423</b>	<b>347</b>	<b>347</b>	<b>357</b>	<b>405</b>	<b>-0.3%</b>	<b>0.9%</b>	<b>-2.0%</b>	<b>0.0%</b>	<b>0.3%</b>	<b>1.3%</b>
Coal	284	234	209	178	112	91	106	-1.9%	-1.1%	-1.6%	-4.5%	-2.0%	1.6%
Oil	55	41	23	10	12	15	21	-2.9%	-5.5%	-8.3%	2.3%	1.9%	3.4%
Gas	50	94	141	89	127	140	138	6.6%	4.1%	-4.5%	3.6%	1.0%	-0.1%
Biomass & Waste	6	15	49	69	94	109	137	9.8%	12.9%	3.5%	3.2%	1.5%	2.3%
Other	0	0	0	1	2	2	2	4.0%	1.6%	8.9%	3.2%	0.2%	3.0%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>2 594</b>	<b>3 031</b>	<b>3 366</b>	<b>3 252</b>	<b>3 619</b>	<b>4 088</b>	<b>4 569</b>	<b>1.6%</b>	<b>1.1%</b>	<b>-0.3%</b>	<b>1.1%</b>	<b>1.2%</b>	<b>1.1%</b>
Coal	1 050	966	862	760	510	430	529	-0.8%	-1.1%	-1.3%	-3.9%	-1.7%	2.1%
of which CCS	0	0	0	0	0	31	265	n.s.	n.s.	n.s.	n.s.	n.s.	24.1%
Oil	224	181	87	42	52	64	91	-2.1%	-7.1%	-7.0%	2.3%	2.0%	3.5%
Gas	193	480	763	479	679	760	759	9.5%	4.8%	-4.5%	3.5%	1.1%	0.0%
of which CCS	0	0	0	0	0	20	113	n.s.	n.s.	n.s.	n.s.	n.s.	19.0%
Biomass & Waste	20	46	143	233	337	403	524	8.9%	12.0%	5.0%	3.8%	1.8%	2.7%
of which CCS	0	0	0	0	0	0	24	n.s.	n.s.	n.s.	n.s.	n.s.	47.8%
Nuclear	795	945	917	765	804	998	964	1.7%	-0.3%	-1.8%	0.5%	2.2%	-0.3%
Hydro	309	386	407	397	401	395	394	2.3%	0.5%	-0.2%	0.1%	-0.2%	0.0%
Wind	1	22	149	380	534	670	878	39.8%	21.0%	9.8%	3.5%	2.3%	2.7%
Solar	0	0	33	164	224	247	242	27.8%	n.s.	17.5%	3.2%	1.0%	-0.2%
Other	3	5	6	34	77	121	189	4.0%	1.6%	19.6%	8.7%	4.6%	4.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>634</b>	<b>720</b>	<b>923</b>	<b>1 128</b>	<b>1 274</b>	<b>1 349</b>	<b>1 347</b>	<b>1.3%</b>	<b>2.5%</b>	<b>2.0%</b>	<b>1.2%</b>	<b>0.6%</b>	<b>0.0%</b>
Coal	224	202	193	181	135	93	84	-1.0%	-0.4%	-0.6%	-2.9%	-3.6%	-1.0%
of which CCS	0	0	0	0	0	5	34	n.s.	n.s.	n.s.	n.s.	n.s.	22.1%
Oil	95	81	66	37	32	29	32	-1.5%	-2.1%	-5.6%	-1.4%	-1.0%	1.0%
Gas	65	129	220	254	278	276	195	7.1%	5.4%	1.4%	0.9%	-0.1%	-3.4%
of which CCS	0	0	0	0	0	3	14	n.s.	n.s.	n.s.	n.s.	n.s.	18.0%
Biomass & Waste	10	17	47	60	79	92	95	5.3%	10.8%	2.4%	2.8%	1.5%	0.3%
of which CCS	0	0	0	0	0	0	4	n.s.	n.s.	n.s.	n.s.	n.s.	45.7%
Nuclear	123	138	131	110	113	136	128	1.1%	-0.5%	-1.8%	0.3%	1.8%	-0.6%
Hydro	116	140	148	151	153	151	152	1.9%	0.5%	0.2%	0.1%	-0.1%	0.0%
Wind	0	12	85	175	253	311	391	40.0%	21.4%	7.5%	3.7%	2.1%	2.3%
Solar	0	0	31	152	206	225	219	35.9%	n.s.	17.1%	3.1%	0.8%	-0.2%
Other	0	1	1	9	22	36	51	2.0%	2.3%	27.4%	10.1%	4.8%	3.6%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>1 152</b>	<b>1 197</b>	<b>1 217</b>	<b>1 116</b>	<b>1 080</b>	<b>1 075</b>	<b>1 066</b>	<b>0.4%</b>	<b>0.2%</b>	<b>-0.9%</b>	<b>-0.3%</b>	<b>0.0%</b>	<b>-0.1%</b>
Coal	141	73	57	55	46	40	36	-6.3%	-2.5%	-0.4%	-1.8%	-1.5%	-0.8%
Oil	503	540	505	442	372	315	262	0.7%	-0.7%	-1.3%	-1.7%	-1.7%	-1.8%
Gas	229	273	279	225	226	229	224	1.8%	0.2%	-2.1%	0.0%	0.1%	-0.2%
Electricity	186	218	244	238	265	301	337	1.6%	1.2%	-0.3%	1.1%	1.3%	1.2%
Heat	55	45	55	51	61	71	81	-1.9%	1.9%	-0.6%	1.7%	1.6%	1.3%
Biomass & Other	38	48	78	104	110	120	125	2.3%	4.9%	2.9%	0.6%	0.9%	0.4%
Share of Renewables <sup>3</sup> (%)	6%	8%	13%	20%	27%	32%	38%	2.5%	4.8%	5.0%	2.7%	1.9%	1.6%
<b>Industry (incl. non-energy use)</b>	<b>466</b>	<b>441</b>	<b>393</b>	<b>374</b>	<b>350</b>	<b>339</b>	<b>329</b>	<b>-0.6%</b>	<b>-1.1%</b>	<b>-0.5%</b>	<b>-0.6%</b>	<b>-0.3%</b>	<b>-0.3%</b>
Coal	93	60	44	46	40	35	33	-4.2%	-3.1%	0.5%	-1.5%	-1.2%	-0.5%
Oil	139	144	127	105	89	77	65	0.3%	-1.3%	-1.8%	-1.6%	-1.5%	-1.6%
Gas	114	118	97	91	85	80	71	0.4%	-1.9%	-0.6%	-0.7%	-0.6%	-1.1%
Electricity	85	91	89	90	98	107	116	0.7%	-0.3%	0.2%	0.9%	0.8%	0.8%
Heat	21	11	15	14	14	13	13	-6.5%	3.6%	-0.7%	-0.2%	-0.3%	-0.2%
Biomass & Other	14	17	22	28	25	27	31	1.9%	2.6%	2.5%	-1.1%	1.1%	1.2%
<b>Buildings</b>	<b>394</b>	<b>423</b>	<b>478</b>	<b>412</b>	<b>425</b>	<b>450</b>	<b>465</b>	<b>0.7%</b>	<b>1.2%</b>	<b>-1.5%</b>	<b>0.3%</b>	<b>0.6%</b>	<b>0.3%</b>
Coal	46	12	12	8	5	4	3	-12.8%	0.0%	-4.2%	-3.3%	-3.6%	-3.9%
Oil	89	80	63	50	55	56	52	-1.1%	-2.4%	-2.2%	0.8%	0.3%	-0.8%
Gas	110	150	177	128	124	122	117	3.2%	1.6%	-3.2%	-0.3%	-0.2%	-0.4%
Electricity	90	116	146	137	140	153	169	2.5%	2.3%	-0.7%	0.3%	0.9%	1.0%
Heat	34	35	40	37	47	57	68	0.2%	1.3%	-0.6%	2.3%	2.1%	1.7%
Biomass & Other	24	30	41	52	54	57	56	2.3%	3.2%	2.6%	0.3%	0.6%	-0.1%
<b>Agriculture</b>	<b>33</b>	<b>29</b>	<b>26</b>	<b>25</b>	<b>26</b>	<b>28</b>	<b>29</b>	<b>-1.4%</b>	<b>-1.1%</b>	<b>-0.3%</b>	<b>0.5%</b>	<b>0.6%</b>	<b>0.5%</b>
Coal	2	1	1	1	1	1	1	-5.0%	0.8%	-2.3%	-2.0%	-2.0%	-2.0%
Oil	21	18	14	14	15	16	17	-1.2%	-2.3%	-0.3%	0.7%	0.6%	0.6%
Gas	5	4	4	4	4	4	4	-1.6%	-1.0%	0.0%	0.3%	0.4%	0.3%
Electricity	5	4	5	5	5	6	6	-1.7%	1.3%	0.2%	0.9%	1.0%	1.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	1	2	2	2	2	2	2.4%	4.4%	-0.3%	0.0%	0.0%	0.0%
<b>Transport</b>	<b>259</b>	<b>305</b>	<b>320</b>	<b>304</b>	<b>277</b>	<b>258</b>	<b>242</b>	<b>1.6%</b>	<b>0.5%</b>	<b>-0.5%</b>	<b>-0.9%</b>	<b>-0.7%</b>	<b>-0.6%</b>
Coal	0	0	0	0	0	0	0	-26.4%	1.7%	-3.5%	0.0%	0.0%	0.0%
Oil	253	297	300	273	214	167	129	1.6%	0.1%	-1.0%	-2.4%	-2.5%	-2.5%
Gas	0	0	1	3	13	23	32	5.3%	12.9%	9.5%	16.1%	5.5%	3.3%
Electricity	5	6	5	7	21	35	46	1.3%	-1.4%	2.3%	12.4%	5.1%	2.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	1	14	22	29	34	36	n.s.	34.1%	5.0%	2.8%	1.4%	0.8%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>134</b>	<b>119</b>	<b>128</b>	<b>124</b>	<b>124</b>	<b>123</b>	<b>118</b>	<b>-1.2%</b>	<b>0.7%</b>	<b>-0.3%</b>	<b>0.0%</b>	<b>-0.2%</b>	<b>-0.4%</b>

The EU28 results of the GECO2016 Reference should not be used as an official European Commission projection of energy and GHG emissions for the EU.

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses

<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants

<sup>4</sup> includes statistical differences



Iceland	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	0.3	0.3	0.3	0.3	0.4	0.4	0.4	1.0%	1.2%	0.7%	0.6%	0.4%	0.2%
GDP per capita (ppp, k\$'05)	26	30	33	40	47	56	68	1.6%	0.9%	2.0%	1.7%	1.7%	2.1%
GDP per capita (mer, k\$'05)	41	49	56	69	82	97	119	1.6%	1.4%	2.1%	1.7%	1.7%	2.1%
Share Value Added - Agriculture (%)	12	9	7	7	7	7	7	-2.6%	-2.2%	-0.3%	-0.2%	-0.2%	-0.2%
Share Value Added - Industry (%)	31	26	25	22	19	16	13	-1.6%	-0.4%	-1.2%	-1.5%	-1.7%	-2.5%
Share Value Added - Services (%)	57	65	68	71	74	77	81	1.2%	0.4%	0.4%	0.4%	0.4%	0.5%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	17	19	-6.5%	7.4%	-4.3%	1.2%	2.1%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	18	21	30	38	52	70	93	1.4%	3.8%	2.2%	3.3%	3.0%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	5	4	4	7	7	7	6	-0.4%	-0.8%	5.6%	-0.2%	-0.1%	-0.9%
Total GHG (excl. sinks)	5	4	4	7	7	7	6	-0.3%	-0.6%	5.5%	-0.2%	-0.1%	-0.8%
Total GHG (energy, industry, agriculture)	3	3	3	6	6	6	5	-0.1%	-0.3%	6.7%	-0.2%	-0.2%	-1.0%
CO <sub>2</sub>	2	2	2	5	5	4	4	1.1%	-0.9%	8.4%	0.2%	-0.6%	-1.8%
CH <sub>4</sub>	0	0	0	0	0	0	0	0.7%	0.4%	-1.2%	-0.7%	0.5%	0.1%
N <sub>2</sub> O	1	0	0	1	1	1	1	-0.5%	-0.9%	8.2%	-0.8%	1.7%	1.7%
F gases	0	0	0	0	0	0	0	-9.0%	5.2%	-3.7%	-8.6%	-1.0%	-2.8%
Total GHG from Energy and Industry	3	3	3	5	5	5	4	0.1%	-0.4%	7.7%	-0.5%	-0.4%	-1.5%
CO <sub>2</sub> Emissions from Fuel Comb.	2	2	2	4	4	4	3	0.7%	-0.9%	8.5%	-0.3%	-0.7%	-1.7%
Power generation/District heating	0	0	0	1	1	1	1	0.0%	0.0%	n.s.	-3.2%	1.0%	0.3%
Industry	1	1	0	1	2	2	1	0.8%	-4.9%	13.1%	2.8%	-1.0%	-3.4%
Buildings	0	0	0	0	0	0	0	-4.8%	-7.5%	25.3%	3.0%	0.3%	-0.7%
Agriculture	1	1	1	1	1	0	0	1.0%	-2.2%	0.6%	-1.3%	-3.6%	-4.0%
Transport	1	1	1	1	1	1	0	0.5%	3.0%	-0.6%	-2.3%	-1.9%	-1.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	49.1%	3.2%	6.9%	0.4%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	24.1%	15.7%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	26.6%	16.8%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	10.8%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	14.5%	15.1%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	1	2	5	6	7	7	7	10.5%	11.3%	1.3%	2.5%	0.1%	-0.4%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Natural gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	6.0%	1.1%	2.1%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	11.7%	2.5%	-1.5%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	7.6%
Hydro	0	1	1	1	1	1	1	4.2%	7.1%	0.2%	0.2%	0.2%	0.2%
Other renewables	0	1	4	4	6	6	6	16.0%	12.9%	1.4%	2.8%	0.0%	-0.4%
Net Imports	1	1	1	1	1	1	1						
Coal	0	0	0	1	1	1	0						
Oil	1	1	1	1	1	0	0						
Natural gas	0	0	0	0	0	0	1						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	1	2	6	7	9	9	8	6.5%	8.7%	2.3%	2.0%	0.1%	-0.3%
Coal	0	0	0	1	1	1	0	4.6%	-1.1%	18.0%	2.3%	-1.3%	-2.5%
Oil	1	1	1	1	1	0	0	0.2%	-1.3%	3.4%	-3.3%	-3.2%	-2.7%
Natural gas	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	5.2%	7.3%	2.6%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	11.1%	4.5%	1.7%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	7.6%
Hydro	0	1	1	1	1	1	1	4.2%	7.1%	0.2%	0.2%	0.2%	0.2%
Other renewables	0	1	4	4	6	6	6	16.0%	12.9%	1.4%	2.8%	0.0%	-0.4%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	1	2	6	7	9	9	8	6.5%	8.7%	2.3%	2.0%	0.1%	-0.3%
Energy for Power Generation	1	2	5	6	8	8	8	10.8%	11.4%	1.8%	2.1%	0.2%	-0.2%
Other Energy Transformation & Losses	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Final consumption	2	2	3	3	3	3	3	0.9%	3.7%	1.9%	1.0%	0.1%	-0.3%
Steel, Non-Met. Minerals and Chem.	0	0	0	1	1	1	0	3.9%	-1.0%	11.5%	2.5%	-0.9%	-2.6%
Other Industry	0	0	1	1	1	2	2	5.5%	8.9%	1.7%	1.0%	0.5%	0.0%
Non-Energy Use	0	0	0	0	0	0	0	-5.4%	-6.9%	-5.5%	-1.0%	-1.3%	-1.8%
Residential	1	0	0	0	0	0	0	-6.0%	2.0%	-0.8%	0.0%	-0.4%	-0.6%
Services	0	0	0	0	0	0	0	10.6%	1.9%	-0.3%	1.2%	0.8%	0.9%
Agriculture	0	0	0	0	0	0	0	1.0%	-1.9%	1.0%	1.1%	0.8%	0.8%
Road	0	0	0	0	0	0	0	0.9%	2.9%	0.1%	-1.1%	-0.7%	-0.3%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	1.5%	1.4%	1.5%
Aviation	0	0	0	0	0	0	0	-2.0%	-1.2%	-2.2%	0.2%	0.3%	0.2%
Other Transport	0	0	0	0	0	0	0	-12.4%	8.2%	-6.5%	0.6%	-0.3%	-0.7%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Iceland	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>15.7%</b>	<b>12.9%</b>	<b>8.1%</b>	<b>0.4%</b>	<b>1.0%</b>	<b>0.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-0.4%	-3.2%	-3.2%
Oil	0	0	0	0	0	0	0	0.0%	0.0%	n.s.	-13.3%	-22.4%	n.s.
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	4.7%	9.5%	3.1%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	1.1%	-0.4%	0.0%
Other	0	0	0	0	1	1	1	16.0%	12.9%	1.4%	2.7%	-0.1%	-0.5%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>5</b>	<b>8</b>	<b>17</b>	<b>20</b>	<b>22</b>	<b>24</b>	<b>25</b>	<b>5.5%</b>	<b>8.3%</b>	<b>1.6%</b>	<b>1.1%</b>	<b>0.7%</b>	<b>0.4%</b>
Coal	0	0	0	1	1	0	0	n.s.	n.s.	n.s.	-0.1%	-3.2%	-2.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	14.7%
Oil	0	0	0	1	0	0	0	-1.8%	-8.8%	n.s.	-13.3%	-22.6%	n.s.
Gas	0	0	0	0	1	2	2	n.s.	n.s.	n.s.	5.1%	10.3%	3.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	12.4%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	1.7%	-0.1%	0.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	4	6	13	13	13	14	14	4.2%	7.1%	0.2%	0.2%	0.2%	0.2%
Wind	0	0	0	0	1	1	1	n.s.	n.s.	n.s.	17.5%	5.0%	0.8%
Solar	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	17.8%	11.4%	5.2%
Other	0	1	4	5	7	7	7	16.0%	12.9%	1.4%	2.7%	0.0%	-0.2%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>3.9%</b>	<b>6.5%</b>	<b>4.6%</b>	<b>2.6%</b>	<b>2.0%</b>	<b>0.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	1.9%	-1.6%	-1.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	15.2%
Oil	0	0	0	0	0	0	0	0.3%	-1.9%	10.6%	0.0%	-0.7%	-0.9%
Gas	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	7.7%	13.0%	2.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	12.8%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	1.0%	-0.1%	0.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	1	1	2	2	2	2	2	3.5%	5.9%	0.6%	0.2%	0.2%	0.2%
Wind	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	17.3%	4.9%	0.7%
Solar	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	17.8%	11.4%	5.2%
Other	0	0	1	1	2	2	3	14.4%	12.8%	9.6%	3.8%	1.4%	0.7%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>0.9%</b>	<b>3.7%</b>	<b>1.9%</b>	<b>1.0%</b>	<b>0.1%</b>	<b>-0.3%</b>
Coal	0	0	0	0	1	0	0	4.6%	-0.9%	15.3%	3.1%	-1.0%	-2.8%
Oil	1	1	1	1	0	0	0	0.2%	-1.3%	0.7%	-1.4%	-2.5%	-2.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	6.2%	1.8%	0.3%
Electricity	0	1	1	2	2	2	2	5.9%	8.6%	1.9%	1.1%	0.8%	0.4%
Heat	1	0	1	0	0	0	0	-2.9%	1.7%	-2.6%	0.2%	-0.3%	-0.6%
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	11.9%	6.2%	2.8%
Share of Renewables <sup>3</sup> (%)	28%	38%	56%	50%	54%	58%	63%	3.0%	3.9%	-1.1%	0.8%	0.7%	0.8%
<b>Industry (incl. non-energy use)</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>4.0%</b>	<b>6.4%</b>	<b>3.6%</b>	<b>1.4%</b>	<b>0.1%</b>	<b>-0.7%</b>
Coal	0	0	0	0	1	0	0	4.6%	-0.9%	15.3%	3.1%	-1.0%	-2.8%
Oil	0	0	0	0	0	0	0	-0.2%	-9.4%	4.1%	0.9%	-1.3%	-3.1%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	9.4%	3.0%	-0.2%
Electricity	0	0	1	1	2	2	2	7.4%	9.9%	1.8%	1.0%	0.5%	0.0%
Heat	0	0	0	0	0	0	0	-9.3%	1.2%	0.7%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	10.1%	0.5%	1.3%
<b>Buildings</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>-1.7%</b>	<b>1.9%</b>	<b>-0.6%</b>	<b>0.6%</b>	<b>0.2%</b>	<b>0.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	-4.8%	-7.5%	15.9%	1.9%	-0.4%	-1.5%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	3.9%	0.8%	-0.3%
Electricity	0	0	0	0	0	0	0	2.4%	3.1%	1.8%	0.7%	1.2%	1.7%
Heat	1	0	1	0	0	0	0	-2.5%	1.7%	-2.7%	0.2%	-0.3%	-0.7%
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-2.3%	-4.3%	-3.1%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0%</b>	<b>-1.9%</b>	<b>1.0%</b>	<b>1.1%</b>	<b>0.8%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	1.0%	-2.2%	0.6%	-1.3%	-3.6%	-4.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	0.9%	1.1%	1.9%	4.6%	5.0%	3.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	25.5%	8.6%	3.5%
<b>Transport</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0%</b>	<b>2.9%</b>	<b>-0.1%</b>	<b>-1.0%</b>	<b>-0.7%</b>	<b>-0.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	0.0%	2.9%	-0.6%	-2.7%	-2.3%	-1.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	17.3%	3.7%	2.0%
Electricity	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	19.2%	4.8%	2.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	8.4%	3.6%	1.1%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Norway	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	4	4	5	6	6	7	8	0.6%	0.8%	1.4%	1.4%	1.1%	0.8%
GDP per capita (ppp, k\$'05)	32	44	47	49	53	56	60	3.1%	0.7%	0.5%	0.6%	0.6%	0.7%
GDP per capita (mer, k\$'05)	46	62	67	68	73	77	82	3.1%	0.7%	0.3%	0.6%	0.6%	0.7%
Share Value Added - Agriculture (%)	3	2	2	2	2	2	2	-4.8%	-2.7%	-0.1%	-0.1%	-0.1%	-0.1%
Share Value Added - Industry (%)	34	42	40	39	36	34	32	2.1%	-0.5%	-0.3%	-0.6%	-0.6%	-0.8%
Share Value Added - Services (%)	63	56	59	60	62	64	67	-1.1%	0.5%	0.2%	0.4%	0.3%	0.4%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	17	19	-6.5%	7.4%	-4.3%	1.2%	2.1%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	18	21	30	38	52	70	93	1.4%	3.8%	2.2%	3.3%	3.0%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	39	28	26	29	26	23	14	-3.3%	-0.7%	1.3%	-1.0%	-1.6%	-4.7%
Total GHG (excl. sinks)	50	53	54	53	52	52	45	0.7%	0.2%	-0.3%	-0.2%	0.1%	-1.5%
Total GHG (energy, industry, agriculture)	49	52	53	52	52	52	45	0.5%	0.2%	-0.1%	-0.1%	0.1%	-1.5%
CO <sub>2</sub>	32	38	43	43	43	44	36	1.7%	1.2%	0.1%	0.1%	0.0%	-1.9%
CH <sub>4</sub>	5	5	4	4	3	3	3	0.0%	-1.1%	-1.6%	-1.0%	0.1%	-0.2%
N <sub>2</sub> O	6	6	4	4	4	5	5	-0.2%	-3.5%	-0.1%	0.2%	1.0%	1.1%
F gases	6	3	1	1	0	0	0	-7.5%	-7.6%	-1.9%	-9.5%	0.3%	-0.4%
Total GHG from Energy and Industry	44	47	48	47	46	46	37	0.6%	0.3%	-0.3%	-0.2%	-0.1%	-1.9%
CO <sub>2</sub> Emissions from Fuel Comb.	27	32	38	38	38	38	31	1.5%	1.8%	-0.1%	0.1%	0.0%	-2.1%
Power generation/District heating	0	0	2	1	1	2	0	3.3%	28.4%	-5.8%	3.0%	5.6%	n.s.
Industry	6	6	7	8	8	7	6	1.5%	1.0%	1.0%	0.3%	-0.8%	-1.8%
Buildings	3	1	2	1	1	1	0	-5.2%	0.3%	-5.4%	-2.4%	-2.3%	-2.0%
Agriculture	1	2	2	2	1	1	1	2.6%	0.7%	-1.7%	-1.4%	-3.7%	-4.2%
Transport	10	12	14	15	13	11	9	1.5%	1.8%	0.6%	-1.4%	-1.7%	-1.7%
Other	8	10	12	12	14	16	15	2.9%	1.2%	0.0%	1.6%	1.5%	-0.7%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	4	12	n.s.	n.s.	n.s.	n.s.	48.8%	12.4%
Coal	0	0	0	0	0	3	8	n.s.	n.s.	n.s.	n.s.	57.0%	9.1%
Gas	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	49.7%	15.1%
Biomass	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	6.1%	47.3%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	117	220	207	168	132	99	87	6.5%	-0.6%	-2.1%	-2.4%	-2.8%	-1.3%
Coal	0	0	1	2	2	2	3	8.6%	11.5%	3.6%	0.3%	1.6%	1.3%
Oil	85	165	105	77	46	25	15	6.9%	-4.4%	-3.1%	-5.1%	-5.9%	-4.7%
Natural gas	21	41	89	72	67	53	50	6.8%	8.0%	-2.0%	-0.8%	-2.2%	-0.7%
Biomass	1	1	1	4	4	4	3	2.8%	0.7%	10.9%	0.0%	-0.8%	-0.6%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	11.7%	7.3%
Hydro	10	12	10	12	12	12	12	1.6%	-1.9%	1.4%	0.2%	0.1%	0.1%
Other renewables	0	0	0	1	2	3	4	n.s.	38.4%	23.6%	9.4%	5.3%	3.1%
Net Imports	-96	-194	-173	-134	-95	-59	-46						
Coal	1	1	0	0	0	0	1						
Oil	-76	-156	-92	-64	-34	-14	-6						
Natural gas	-19	-37	-81	-67	-60	-45	-41						
Biomass	0	0	0	-1	0	1	1						
Biofuels	0	0	0	0	0	0	0						
Electricity	-1	-2	1	-1	-1	-1	-1						
Primary Energy Demand <sup>2</sup>	21	26	34	34	37	40	41	2.1%	2.6%	-0.1%	0.9%	0.7%	0.3%
Coal	1	1	1	2	2	3	3	2.0%	-2.5%	5.4%	2.4%	3.2%	1.7%
Oil	8	9	13	13	12	11	10	0.7%	3.8%	0.1%	-1.0%	-1.1%	-1.1%
Natural gas	2	4	8	5	7	8	8	7.7%	6.4%	-3.8%	2.5%	2.0%	0.4%
Biomass	1	1	1	3	4	5	5	2.9%	1.0%	7.1%	4.3%	0.8%	0.3%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	11.7%	7.3%
Hydro	10	12	10	12	12	12	12	1.6%	-1.9%	1.4%	0.2%	0.1%	0.1%
Other renewables	0	0	0	1	2	3	4	n.s.	38.4%	23.6%	9.4%	5.3%	3.1%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	21	26	34	34	37	40	41	2.1%	2.6%	-0.1%	0.9%	0.7%	0.3%
Energy for Power Generation	11	12	11	15	17	19	21	1.6%	-1.0%	2.6%	1.4%	1.3%	1.1%
Other Energy Transformation & Losses	2	4	12	8	10	11	11	7.0%	12.6%	-3.5%	1.5%	1.4%	0.2%
Final consumption	17	20	21	22	23	24	24	1.3%	0.7%	0.1%	0.6%	0.3%	0.1%
Steel, Non-Met. Minerals and Chem.	2	3	2	3	4	4	3	1.8%	-1.2%	3.4%	0.9%	-0.7%	-1.4%
Other Industry	4	4	4	4	4	5	5	1.0%	-1.2%	0.4%	0.8%	0.8%	0.6%
Non-Energy Use	2	2	2	2	2	2	2	1.6%	0.5%	0.2%	-0.2%	-0.3%	-0.7%
Residential	4	4	4	4	4	5	5	0.6%	1.5%	-1.2%	0.9%	1.0%	0.8%
Services	2	2	3	3	3	3	4	0.4%	3.0%	-1.3%	1.1%	1.2%	1.2%
Agriculture	1	1	1	1	1	1	1	4.2%	0.7%	-0.9%	1.0%	0.8%	0.7%
Road	3	3	4	4	3	3	3	1.4%	1.9%	0.1%	-0.7%	-0.7%	-1.1%
Rail	0	0	0	0	0	0	0	-2.2%	0.2%	0.7%	1.1%	0.9%	0.7%
Aviation	0	0	0	0	1	1	1	13.4%	2.4%	2.2%	1.7%	1.5%	1.1%
Other Transport	1	1	1	1	1	1	1	1.1%	1.3%	-1.3%	0.2%	-0.7%	-1.4%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Norway	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>3.1%</b>	<b>22.1%</b>	<b>8.4%</b>	<b>3.7%</b>	<b>2.5%</b>	<b>2.1%</b>
Coal	0	0	0	0	0	1	2	0.1%	1.6%	3.3%	11.6%	26.3%	6.1%
Oil	0	0	0	0	0	0	0	-8.8%	10.6%	n.s.	n.s.	n.s.	n.s.
Gas	0	0	1	0	0	1	1	n.s.	39.8%	-6.4%	1.0%	4.3%	0.7%
Biomass & Waste	0	0	0	2	3	2	3	1.9%	8.9%	24.8%	4.0%	-1.0%	0.3%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>122</b>	<b>143</b>	<b>124</b>	<b>151</b>	<b>168</b>	<b>187</b>	<b>206</b>	<b>1.6%</b>	<b>-1.4%</b>	<b>2.1%</b>	<b>1.1%</b>	<b>1.1%</b>	<b>1.0%</b>
Coal	0	0	0	0	1	5	9	-1.3%	3.8%	5.4%	11.9%	25.3%	6.2%
of which CCS	0	0	0	0	0	4	9	n.s.	n.s.	n.s.	n.s.	n.s.	8.8%
Oil	0	0	0	0	0	0	0	4.1%	13.2%	n.s.	n.s.	n.s.	n.s.
Gas	0	0	5	2	3	4	4	n.s.	36.9%	-7.1%	1.3%	4.6%	0.6%
of which CCS	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	n.s.	10.6%
Biomass & Waste	0	0	0	7	11	10	11	1.7%	4.7%	31.7%	4.1%	-0.9%	1.1%
of which CCS	0	0	0	0	0	0	3	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	121	142	117	134	137	139	141	1.6%	-1.9%	1.4%	0.2%	0.1%	0.1%
Wind	0	0	1	7	17	28	37	n.s.	40.5%	23.2%	8.5%	5.2%	3.0%
Solar	0	0	0	0	1	2	3	n.s.	4.2%	33.5%	20.1%	6.4%	5.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	32.0%	17.6%	11.7%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>27</b>	<b>28</b>	<b>33</b>	<b>45</b>	<b>56</b>	<b>65</b>	<b>71</b>	<b>0.5%</b>	<b>1.4%</b>	<b>3.2%</b>	<b>2.3%</b>	<b>1.4%</b>	<b>0.9%</b>
Coal	0	0	0	4	7	8	8	5.9%	-4.6%	55.6%	5.6%	1.1%	0.2%
of which CCS	0	0	0	0	0	1	4	n.s.	n.s.	n.s.	n.s.	n.s.	19.1%
Oil	0	0	0	1	2	2	2	-17.6%	7.2%	41.0%	4.6%	0.0%	-0.4%
Gas	0	0	1	3	6	8	8	n.s.	44.5%	8.2%	6.6%	3.2%	0.6%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	18.6%
Biomass & Waste	0	0	0	1	1	1	2	7.7%	-1.7%	27.8%	0.4%	-0.7%	1.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	27	28	31	32	33	33	34	0.5%	0.9%	0.4%	0.2%	0.1%	0.1%
Wind	0	0	0	3	6	10	14	n.s.	42.1%	20.8%	8.3%	5.0%	2.9%
Solar	0	0	0	0	1	2	3	n.s.	4.2%	33.5%	20.1%	6.4%	5.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.1%	11.2%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>17</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>24</b>	<b>1.3%</b>	<b>0.7%</b>	<b>0.1%</b>	<b>0.6%</b>	<b>0.3%</b>	<b>0.1%</b>
Coal	1	1	1	2	2	2	1	2.1%	-4.0%	8.6%	2.2%	-1.0%	-2.3%
Oil	7	8	9	8	7	5	4	0.2%	1.3%	-0.9%	-1.7%	-2.2%	-2.3%
Gas	0	1	1	1	1	2	2	n.s.	2.0%	3.9%	3.2%	1.5%	0.4%
Electricity	8	9	10	10	11	13	14	1.2%	0.4%	0.1%	1.2%	1.2%	1.0%
Heat	0	0	0	0	1	1	1	5.6%	11.6%	1.1%	3.5%	2.1%	0.8%
Biomass & Other	1	1	1	1	1	2	2	2.9%	0.8%	-3.5%	2.8%	2.7%	1.3%
Share of Renewables <sup>3</sup> (%)	67%	70%	55%	64%	70%	76%	82%	0.3%	-2.4%	1.5%	1.0%	0.9%	0.8%
<b>Industry (incl. non-energy use)</b>	<b>8</b>	<b>9</b>	<b>8</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>1.4%</b>	<b>-0.7%</b>	<b>1.3%</b>	<b>0.6%</b>	<b>0.0%</b>	<b>-0.3%</b>
Coal	1	1	1	2	2	2	1	2.2%	-4.0%	8.5%	2.2%	-1.0%	-2.3%
Oil	3	2	3	2	2	2	1	-1.3%	1.4%	-1.4%	-1.5%	-2.0%	-2.2%
Gas	0	1	1	1	1	1	1	n.s.	1.3%	3.5%	1.8%	0.8%	-0.4%
Electricity	4	4	4	4	5	5	5	1.2%	-1.5%	1.2%	0.7%	0.7%	0.6%
Heat	0	0	0	0	0	0	0	1.9%	7.1%	2.3%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	1	0	0	0	1	1	4.6%	-3.1%	-4.1%	2.8%	3.0%	2.4%
<b>Buildings</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>0.5%</b>	<b>2.0%</b>	<b>-1.2%</b>	<b>1.0%</b>	<b>1.1%</b>	<b>1.0%</b>
Coal	0	0	0	0	0	0	0	-7.8%	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	0	0	0	0	0	0	-5.1%	0.0%	-6.6%	-4.5%	-4.3%	-3.7%
Gas	0	0	0	0	0	0	0	n.s.	36.3%	8.4%	5.0%	0.9%	-0.2%
Electricity	4	5	6	5	6	7	7	1.1%	1.8%	-0.7%	1.1%	1.2%	1.1%
Heat	0	0	0	0	1	1	1	6.5%	12.3%	1.0%	4.0%	2.3%	0.8%
Biomass & Other	1	1	1	0	0	0	0	1.5%	2.2%	-4.6%	-1.0%	-0.6%	-0.3%
<b>Agriculture</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4.2%</b>	<b>0.7%</b>	<b>-0.9%</b>	<b>1.0%</b>	<b>0.8%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	1	1	1	0	0	0	2.7%	0.4%	-1.6%	-1.4%	-3.8%	-4.2%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	-3.3%	-0.9%	-2.6%	-2.9%
Electricity	0	0	0	0	0	0	0	12.0%	0.4%	1.0%	3.0%	3.1%	2.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	10.2%	11.5%	21.3%	8.7%	3.5%
<b>Transport</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>1.8%</b>	<b>1.8%</b>	<b>0.1%</b>	<b>-0.3%</b>	<b>-0.4%</b>	<b>-0.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	4	5	5	4	3	3	1.8%	1.5%	-0.1%	-1.7%	-2.0%	-2.2%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	24.6%	17.4%	5.2%	3.3%
Electricity	0	0	0	0	0	1	1	-0.4%	1.0%	3.8%	14.8%	5.4%	2.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	2.5%	7.7%	3.9%	0.1%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>2</b>	<b>4</b>	<b>12</b>	<b>8</b>	<b>10</b>	<b>11</b>	<b>11</b>	<b>7.0%</b>	<b>12.6%</b>	<b>-3.5%</b>	<b>1.5%</b>	<b>1.4%</b>	<b>0.2%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Switzerland	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	7	7	8	9	9	10	10	0.7%	0.9%	1.0%	0.6%	0.5%	0.4%
GDP per capita (ppp, k\$'05)	35	36	39	41	46	52	58	0.4%	0.8%	0.5%	1.2%	1.2%	1.1%
GDP per capita (mer, k\$'05)	50	53	58	61	69	77	86	0.5%	1.0%	0.6%	1.2%	1.2%	1.1%
Share Value Added - Agriculture (%)	15	9	5	5	5	5	5	-4.7%	-5.5%	-0.1%	-0.1%	-0.1%	-0.1%
Share Value Added - Industry (%)	31	27	26	25	23	20	18	-1.6%	-0.2%	-0.3%	-1.0%	-1.1%	-1.2%
Share Value Added - Services (%)	54	64	69	70	72	75	77	1.8%	0.7%	0.1%	0.4%	0.3%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	17	19	-6.5%	7.4%	-4.3%	1.2%	2.1%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	18	21	30	38	52	70	93	1.4%	3.8%	2.2%	3.3%	3.0%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	50	49	49	46	37	29	20	-0.2%	0.1%	-0.7%	-2.3%	-2.3%	-3.4%
Total GHG (excl. sinks)	52	49	50	47	38	30	21	-0.5%	0.2%	-0.7%	-2.2%	-2.2%	-3.4%
Total GHG (energy, industry, agriculture)	52	49	50	47	38	30	21	-0.6%	0.2%	-0.7%	-2.2%	-2.2%	-3.7%
CO <sub>2</sub>	43	41	42	39	31	24	14	-0.6%	0.2%	-0.7%	-2.3%	-2.7%	-4.9%
CH <sub>4</sub>	5	4	4	4	3	3	3	-1.3%	-0.6%	-0.6%	-0.4%	-0.1%	-0.2%
N <sub>2</sub> O	4	3	3	3	3	3	3	-0.7%	-0.1%	-0.4%	-1.5%	-0.5%	-0.3%
F gases	0	1	1	1	0	0	0	11.6%	6.2%	-1.3%	-10.7%	0.2%	0.1%
Total GHG from Energy and Industry	46	44	45	41	32	24	15	-0.5%	0.2%	-0.8%	-2.5%	-2.7%	-4.8%
CO <sub>2</sub> Emissions from Fuel Comb.	40	39	40	36	28	21	12	-0.4%	0.2%	-0.8%	-2.4%	-2.9%	-5.4%
Power generation/District heating	1	1	1	0	0	0	-3	-1.1%	-0.1%	-12.5%	0.3%	-1.9%	n.s.
Industry	5	5	5	5	5	4	3	-0.7%	-0.6%	0.3%	0.1%	-1.3%	-2.5%
Buildings	19	16	17	11	8	6	4	-1.4%	0.2%	-4.2%	-3.0%	-3.5%	-3.7%
Agriculture	0	0	0	0	0	0	0	-5.1%	-16.9%	4.5%	-1.0%	-2.6%	-3.0%
Transport	14	16	16	19	14	10	8	0.8%	0.3%	1.6%	-2.9%	-3.0%	-3.1%
Other	1	1	1	2	1	1	0	3.8%	2.2%	1.4%	-2.6%	-3.2%	-8.3%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	1	5	n.s.	n.s.	n.s.	n.s.	7.7%	25.4%
Coal	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	8.6%	12.5%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	2.0%	11.1%
Biomass	0	0	0	0	0	0	4	n.s.	n.s.	n.s.	n.s.	4.7%	50.7%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	10	12	13	13	16	18	19	1.5%	0.4%	0.5%	2.0%	1.4%	0.2%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Natural gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	6.3%	1.3%	2.2%
Biomass	1	2	2	2	2	2	3	2.1%	2.6%	-2.3%	1.3%	0.1%	3.8%
Nuclear <sup>1</sup>	6	7	7	7	9	10	9	1.1%	0.0%	0.3%	2.3%	1.5%	-1.9%
Hydro	3	3	3	3	3	3	3	2.1%	-0.1%	0.4%	0.0%	0.0%	0.0%
Other renewables	0	0	0	1	2	2	4	18.5%	13.6%	31.3%	7.1%	4.3%	4.1%
Net Imports	14	13	14	13	10	8	6						
Coal	0	0	0	0	0	1	1						
Oil	12	11	10	10	7	5	3						
Natural gas	2	2	3	3	3	3	2						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	-1	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	24	25	26	26	26	26	25	0.4%	0.4%	-0.1%	0.1%	0.0%	-0.4%
Coal	0	0	0	0	0	1	1	-8.6%	0.0%	7.6%	3.7%	1.1%	3.7%
Oil	12	11	10	10	7	5	3	-0.8%	-0.6%	0.1%	-3.4%	-3.6%	-3.8%
Natural gas	2	2	3	3	3	3	2	4.0%	2.1%	-0.9%	0.5%	-0.9%	-1.2%
Biomass	1	2	2	1	2	2	3	2.0%	2.7%	-4.8%	2.2%	0.7%	5.3%
Nuclear <sup>1</sup>	6	7	7	7	9	10	9	1.1%	0.0%	0.3%	2.3%	1.5%	-1.9%
Hydro	3	3	3	3	3	3	3	2.1%	-0.1%	0.4%	0.0%	0.0%	0.0%
Other renewables	0	0	0	1	2	2	4	18.5%	13.6%	31.3%	7.1%	4.3%	4.1%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	24	25	26	26	26	26	25	0.4%	0.4%	-0.1%	0.1%	0.0%	-0.4%
Energy for Power Generation	10	11	12	11	14	16	17	1.6%	0.2%	-0.1%	2.1%	1.5%	0.5%
Other Energy Transformation & Losses	0	-1	0	0	1	1	1	n.s.	n.s.	n.s.	3.7%	2.4%	2.3%
Final consumption	19	19	21	20	19	18	17	0.3%	0.7%	-0.2%	-0.5%	-0.5%	-0.4%
Steel, Non-Met. Minerals and Chem.	1	1	1	2	2	2	1	1.0%	0.7%	2.0%	0.6%	-0.9%	-1.3%
Other Industry	2	2	2	2	2	2	2	1.0%	0.0%	-0.5%	0.4%	0.0%	0.0%
Non-Energy Use	1	1	1	0	0	0	0	0.2%	-0.6%	-1.0%	-1.5%	-1.5%	-1.5%
Residential	6	5	6	5	5	5	5	-0.8%	1.4%	-2.0%	-0.4%	-0.3%	-0.2%
Services	3	3	4	3	3	4	4	0.0%	1.2%	-1.5%	0.3%	0.4%	0.5%
Agriculture	0	0	0	0	0	0	0	1.0%	-5.2%	0.9%	1.0%	0.9%	0.9%
Road	5	5	6	7	6	5	4	1.4%	0.3%	1.7%	-1.7%	-1.6%	-1.4%
Rail	0	0	0	0	0	0	0	0.3%	1.8%	0.1%	1.1%	1.0%	0.9%
Aviation	0	0	0	0	0	0	0	-4.9%	-2.8%	5.1%	-0.1%	-0.1%	-0.2%
Other Transport	0	0	0	0	0	0	0	2.3%	-1.0%	-1.0%	-0.1%	-0.8%	-1.6%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Switzerland	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3.1%</b>	<b>2.2%</b>	<b>-26.3%</b>	<b>2.9%</b>	<b>-4.4%</b>	<b>39.1%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	-10.1%	-13.2%	n.s.	n.s.	n.s.	n.s.
Gas	0	0	0	0	0	0	0	9.0%	2.0%	-12.0%	-1.3%	-0.3%	9.4%
Biomass & Waste	1	1	1	0	0	0	1	4.0%	2.7%	n.s.	n.s.	n.s.	n.s.
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>56</b>	<b>68</b>	<b>68</b>	<b>75</b>	<b>89</b>	<b>101</b>	<b>112</b>	<b>1.9%</b>	<b>0.1%</b>	<b>1.1%</b>	<b>1.7%</b>	<b>1.3%</b>	<b>1.0%</b>
Coal	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	-5.2%	-11.2%	n.s.	n.s.	n.s.	n.s.
Gas	0	1	1	0	0	0	1	10.0%	1.9%	-10.0%	-1.1%	-0.4%	9.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	1	2	2	0	0	0	6	8.1%	3.2%	n.s.	n.s.	n.s.	n.s.
of which CCS	0	0	0	0	0	0	5	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	24	26	26	27	35	41	34	1.1%	0.0%	0.3%	2.5%	1.8%	-1.8%
Hydro	31	38	38	39	39	39	39	2.1%	-0.1%	0.4%	0.0%	0.0%	0.0%
Wind	0	0	0	6	10	13	20	n.s.	42.0%	50.2%	5.7%	2.5%	4.3%
Solar	0	0	0	3	4	7	11	21.3%	22.0%	35.9%	5.3%	5.4%	4.4%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.6%	15.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>16</b>	<b>20</b>	<b>20</b>	<b>28</b>	<b>34</b>	<b>42</b>	<b>45</b>	<b>1.7%</b>	<b>0.1%</b>	<b>3.6%</b>	<b>1.8%</b>	<b>2.2%</b>	<b>0.8%</b>
Coal	0	0	0	0	1	1	1	n.s.	n.s.	13.3%	6.3%	0.3%	1.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	18.8%
Oil	0	0	0	0	0	1	1	-6.1%	13.0%	3.4%	3.7%	1.9%	2.1%
Gas	0	0	0	0	1	1	1	8.7%	2.0%	4.3%	5.2%	3.2%	2.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	18.1%
Biomass & Waste	0	0	0	3	4	4	4	7.0%	-3.5%	22.6%	3.2%	1.2%	0.1%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	3	3	3	4	4	5	4	0.8%	0.2%	0.8%	2.5%	1.8%	-2.1%
Hydro	13	16	15	16	16	16	16	1.8%	0.0%	0.2%	0.0%	0.0%	0.0%
Wind	0	0	0	3	4	8	8	n.s.	31.2%	53.1%	3.7%	6.1%	0.5%
Solar	0	0	0	2	4	7	10	21.3%	22.0%	35.9%	5.3%	5.8%	4.1%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.0%	15.0%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>19</b>	<b>19</b>	<b>21</b>	<b>20</b>	<b>19</b>	<b>18</b>	<b>17</b>	<b>0.3%</b>	<b>0.7%</b>	<b>-0.2%</b>	<b>-0.5%</b>	<b>-0.5%</b>	<b>-0.4%</b>
Coal	0	0	0	0	0	0	0	-8.9%	0.5%	6.7%	3.1%	0.1%	-0.9%
Oil	12	11	11	10	7	5	3	-0.4%	-0.3%	-1.0%	-3.5%	-3.8%	-4.1%
Gas	1	2	3	3	3	3	2	3.6%	2.3%	-0.1%	0.5%	-0.9%	-1.5%
Electricity	4	5	5	5	6	7	8	1.2%	1.3%	0.3%	1.8%	1.4%	1.1%
Heat	0	0	1	1	1	2	2	3.0%	5.0%	1.7%	3.6%	2.7%	1.5%
Biomass & Other	1	1	1	1	2	2	2	0.6%	2.7%	1.5%	1.7%	0.7%	0.7%
Share of Renewables <sup>3</sup> (%)	19%	22%	22%	27%	36%	46%	60%	1.5%	0.1%	2.0%	3.2%	2.3%	2.8%
<b>Industry (incl. non-energy use)</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>0.9%</b>	<b>0.1%</b>	<b>0.3%</b>	<b>0.3%</b>	<b>-0.5%</b>	<b>-0.6%</b>
Coal	0	0	0	0	0	0	0	-9.1%	0.4%	7.1%	3.2%	0.2%	-0.9%
Oil	1	1	1	1	1	1	0	0.3%	-2.0%	-2.6%	-1.9%	-2.7%	-3.2%
Gas	1	1	1	1	1	1	1	2.3%	2.0%	1.2%	-0.4%	-1.6%	-2.6%
Electricity	1	2	2	2	2	2	2	0.5%	0.6%	0.0%	0.7%	0.4%	0.4%
Heat	0	0	0	0	0	0	0	10.4%	1.9%	-0.4%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	0	0	1	1	1	1	7.5%	0.1%	3.0%	1.6%	0.3%	0.5%
<b>Buildings</b>	<b>9</b>	<b>9</b>	<b>10</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>-0.5%</b>	<b>1.3%</b>	<b>-1.8%</b>	<b>-0.1%</b>	<b>0.0%</b>	<b>0.1%</b>
Coal	0	0	0	0	0	0	0	-4.6%	2.2%	-3.6%	-10.2%	n.s.	n.s.
Oil	5	4	4	2	1	1	1	-2.3%	-0.6%	-5.4%	-4.0%	-4.6%	-4.6%
Gas	1	1	2	2	1	1	1	3.8%	2.9%	-1.3%	-1.1%	-2.1%	-2.7%
Electricity	2	3	3	3	4	4	5	1.7%	1.7%	0.3%	1.2%	1.3%	1.2%
Heat	0	0	1	1	1	1	2	0.8%	6.3%	2.3%	4.4%	3.0%	1.6%
Biomass & Other	1	1	1	1	1	1	1	-3.0%	4.5%	-0.1%	0.3%	-0.5%	-0.4%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0%</b>	<b>-5.2%</b>	<b>0.9%</b>	<b>1.0%</b>	<b>0.9%</b>	<b>0.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Gas	0	0	0	0	0	0	0	n.s.	-16.9%	4.5%	-1.0%	-2.6%	-3.0%
Electricity	0	0	0	0	0	0	0	1.2%	0.1%	0.4%	1.3%	1.3%	1.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	40.5%	-5.0%	-0.1%	1.1%	1.6%	1.2%
<b>Transport</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>1.2%</b>	<b>0.3%</b>	<b>1.7%</b>	<b>-1.5%</b>	<b>-1.4%</b>	<b>-1.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	5	6	6	7	5	3	2	1.3%	0.2%	1.5%	-3.5%	-3.8%	-4.1%
Gas	0	0	0	0	0	1	1	n.s.	n.s.	16.9%	17.9%	3.9%	1.7%
Electricity	0	0	0	0	1	1	1	0.3%	1.8%	1.8%	9.6%	3.8%	2.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	23.0%	11.8%	4.8%	3.1%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>0</b>	<b>-1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>3.7%</b>	<b>2.4%</b>	<b>2.3%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Other Balkans	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	24	23	23	22	21	20	19	-0.5%	-0.3%	-0.2%	-0.3%	-0.6%	-0.7%
GDP per capita (ppp, k\$'05)	5	4	7	8	11	15	20	-0.9%	4.1%	1.9%	3.2%	3.6%	2.8%
GDP per capita (mer, k\$'05)	0	2	3	3	5	7	9	14.0%	4.6%	1.9%	3.2%	3.6%	2.8%
Share Value Added - Agriculture (%)	17	16	12	11	9	8	7	-0.5%	-2.9%	-1.1%	-1.7%	-1.4%	-0.8%
Share Value Added - Industry (%)	46	25	24	22	21	20	19	-5.9%	-0.2%	-1.0%	-0.3%	-0.4%	-0.5%
Share Value Added - Services (%)	37	59	64	67	69	72	73	4.7%	0.8%	0.6%	0.3%	0.3%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	17	19	-6.5%	7.4%	-4.3%	1.2%	2.1%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	18	21	30	38	52	70	93	1.4%	3.8%	2.2%	3.3%	3.0%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	129	76	120	126	135	142	141	-5.2%	4.7%	0.4%	0.7%	0.5%	0.0%
Total GHG (excl. sinks)	130	95	121	127	135	142	143	-3.1%	2.5%	0.5%	0.6%	0.5%	0.1%
Total GHG (energy, industry, agriculture)	129	93	120	122	125	135	136	-3.3%	2.6%	0.1%	0.3%	0.7%	0.1%
CO <sub>2</sub>	102	72	90	88	86	89	86	-3.4%	2.3%	-0.2%	-0.2%	0.3%	-0.3%
CH <sub>4</sub>	17	12	11	11	12	13	13	-3.5%	-0.7%	0.1%	0.6%	0.5%	0.1%
N <sub>2</sub> O	9	6	10	11	12	13	13	-4.4%	5.4%	0.6%	1.0%	0.7%	0.1%
F gases	1	3	9	12	16	21	25	8.5%	11.5%	2.4%	2.9%	3.0%	2.0%
Total GHG from Energy and Industry	113	81	106	106	108	116	118	-3.3%	2.7%	0.0%	0.2%	0.7%	0.1%
CO <sub>2</sub> Emissions from Fuel Comb.	97	70	86	84	82	84	81	-3.3%	2.1%	-0.3%	-0.3%	0.2%	-0.4%
Power generation/District heating	52	47	52	52	50	50	47	-1.0%	1.1%	0.0%	-0.5%	0.0%	-0.5%
Industry	17	8	10	9	9	9	10	-6.9%	1.6%	-0.5%	-0.3%	0.3%	0.3%
Buildings	14	5	6	4	4	4	3	-10.3%	1.6%	-2.6%	-0.9%	-0.6%	-1.7%
Agriculture	0	1	1	1	1	1	1	9.7%	-4.7%	4.5%	1.0%	1.1%	0.9%
Transport	8	6	13	13	12	12	12	-2.4%	7.2%	-0.4%	-0.5%	0.1%	-0.4%
Other	6	2	5	5	6	8	8	-7.9%	7.3%	-0.7%	2.7%	2.3%	0.1%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	23	20	22	13	15	17	19	-1.3%	1.1%	-5.4%	1.3%	1.3%	1.2%
Coal	17	14	15	4	4	5	5	-1.5%	0.6%	-12.7%	0.7%	0.9%	0.6%
Oil	2	1	2	2	2	1	1	-5.3%	2.5%	0.3%	-0.5%	-1.2%	-2.0%
Natural gas	1	1	0	0	1	1	1	-1.4%	-6.4%	4.0%	1.3%	0.6%	0.2%
Biomass	2	2	2	4	5	6	6	-0.2%	2.1%	7.0%	1.8%	1.4%	0.9%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	10.4%	9.9%
Hydro	1	2	3	2	3	3	4	3.7%	3.9%	-1.4%	1.8%	1.6%	1.4%
Other renewables	0	0	0	0	0	1	2	n.s.	19.8%	30.1%	14.6%	9.7%	6.8%
Net Imports	9	4	9	18	18	19	18						
Coal	-1	-1	0	11	9	8	8						
Oil	7	4	7	6	6	6	5						
Natural gas	3	1	2	2	4	6	6						
Biomass	0	0	0	-1	-1	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	32	24	31	31	33	36	37	-2.9%	2.8%	-0.1%	0.6%	0.9%	0.3%
Coal	16	13	16	15	14	13	13	-2.1%	1.8%	-0.4%	-1.1%	-0.5%	-0.1%
Oil	9	5	9	8	7	7	7	-6.4%	5.8%	-1.2%	-0.4%	0.1%	-1.2%
Natural gas	3	2	2	3	5	6	6	-6.0%	1.9%	2.4%	5.4%	3.2%	-0.4%
Biomass	2	2	2	3	4	5	6	-0.2%	2.3%	4.5%	3.0%	2.0%	1.1%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	10.4%	9.9%
Hydro	1	2	3	2	3	3	4	3.7%	3.9%	-1.4%	1.8%	1.6%	1.4%
Other renewables	0	0	0	0	0	1	2	n.s.	19.8%	30.1%	14.6%	9.7%	6.8%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	32	24	31	31	33	36	37	-2.9%	2.8%	-0.1%	0.6%	0.9%	0.3%
Energy for Power Generation	15	14	16	16	17	19	21	-0.6%	1.6%	0.1%	0.7%	1.1%	0.5%
Other Energy Transformation & Losses	1	1	2	2	3	3	3	-2.8%	6.5%	-1.8%	3.9%	2.6%	0.2%
Final consumption	21	13	19	19	21	23	24	-4.4%	3.6%	0.2%	0.7%	1.1%	0.6%
Steel, Non-Met. Minerals and Chem.	0	1	3	2	2	2	2	5.0%	14.4%	-1.6%	-1.5%	-1.2%	-0.3%
Other Industry	7	3	2	2	3	4	4	-8.3%	-3.5%	1.9%	1.8%	2.1%	1.2%
Non-Energy Use	2	0	1	1	1	1	1	-13.4%	10.4%	-1.8%	0.7%	1.1%	0.2%
Residential	4	5	6	6	7	8	8	1.0%	1.7%	1.2%	0.8%	1.0%	0.3%
Services	4	2	2	2	2	3	3	-9.8%	2.7%	-0.9%	1.6%	2.3%	1.4%
Agriculture	0	0	0	0	0	0	1	11.2%	-3.1%	3.7%	1.0%	1.2%	1.0%
Road	3	2	5	5	5	5	5	-1.1%	6.9%	0.1%	0.4%	0.8%	0.3%
Rail	0	0	0	0	0	0	0	2.1%	18.1%	-4.6%	0.8%	1.0%	0.6%
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other Transport	0	0	0	0	0	0	0	n.s.	4.8%	3.8%	1.7%	1.6%	0.7%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Other Balkans	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>13</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>15</b>	<b>14</b>	<b>-1.1%</b>	<b>1.1%</b>	<b>0.3%</b>	<b>0.2%</b>	<b>0.6%</b>	<b>-0.3%</b>
Coal	12	11	13	13	11	11	10	-0.4%	1.1%	-0.1%	-1.2%	-0.6%	-0.3%
Oil	1	0	0	0	0	1	1	-12.5%	-2.9%	-9.4%	19.0%	4.9%	-3.8%
Gas	0	0	0	1	1	2	2	-7.4%	7.7%	9.4%	10.1%	4.3%	-1.0%
Biomass & Waste	0	0	0	0	1	1	2	n.s.	n.s.	n.s.	9.3%	4.0%	2.4%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>65</b>	<b>59</b>	<b>79</b>	<b>86</b>	<b>100</b>	<b>121</b>	<b>137</b>	<b>-0.9%</b>	<b>3.0%</b>	<b>0.8%</b>	<b>1.6%</b>	<b>1.9%</b>	<b>1.2%</b>
Coal	44	35	45	51	50	53	52	-2.3%	2.6%	1.3%	-0.2%	0.5%	-0.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	1	0	0	2	3	2	-11.9%	-12.4%	3.3%	19.0%	4.8%	-3.7%
Gas	1	0	0	3	7	11	11	-11.4%	0.3%	21.2%	9.7%	4.5%	-0.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	1	4	6	8	n.s.	n.s.	n.s.	9.6%	4.3%	2.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	16	23	34	29	35	40	47	3.7%	3.9%	-1.4%	1.8%	1.6%	1.4%
Wind	0	0	0	0	2	5	11	n.s.	n.s.	n.s.	16.1%	11.7%	7.5%
Solar	0	0	0	0	1	3	6	n.s.	n.s.	n.s.	19.2%	12.1%	8.7%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	19.7%	14.4%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>32</b>	<b>13</b>	<b>14</b>	<b>20</b>	<b>23</b>	<b>28</b>	<b>35</b>	<b>-8.7%</b>	<b>0.6%</b>	<b>4.1%</b>	<b>1.1%</b>	<b>2.1%</b>	<b>2.4%</b>
Coal	27	8	8	12	11	11	12	-11.3%	0.3%	3.3%	-0.8%	0.2%	0.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	1	1	1	1	1	1	-16.3%	1.7%	5.2%	-0.5%	0.5%	1.4%
Gas	1	0	0	1	2	3	3	-17.7%	2.2%	18.6%	4.4%	3.0%	0.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	1	1	1	n.s.	n.s.	n.s.	6.2%	0.9%	3.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	4	4	5	6	8	9	n.s.	0.9%	2.5%	1.8%	1.6%	1.4%
Wind	0	0	0	0	1	2	4	n.s.	n.s.	n.s.	15.9%	11.5%	7.3%
Solar	0	0	0	0	1	2	5	n.s.	n.s.	n.s.	19.1%	12.0%	8.6%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	19.2%	13.9%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>21</b>	<b>13</b>	<b>19</b>	<b>19</b>	<b>21</b>	<b>23</b>	<b>24</b>	<b>-4.4%</b>	<b>3.6%</b>	<b>0.2%</b>	<b>0.7%</b>	<b>1.1%</b>	<b>0.6%</b>
Coal	4	2	2	2	1	1	2	-7.1%	1.2%	-1.8%	-0.9%	-0.3%	1.0%
Oil	8	4	8	7	7	6	6	-6.1%	6.3%	-0.5%	-0.9%	-0.3%	-0.9%
Gas	3	1	1	1	2	2	2	-7.6%	0.0%	0.3%	2.9%	2.3%	0.2%
Electricity	4	4	5	5	6	8	9	-0.8%	2.5%	0.8%	1.7%	2.0%	1.3%
Heat	1	1	1	1	1	2	2	-1.9%	5.2%	0.2%	2.4%	1.9%	1.2%
Biomass & Other	2	2	2	3	3	4	4	-0.2%	2.2%	3.0%	1.4%	1.4%	0.9%
Share of Renewables <sup>3</sup> (%)	15%	26%	26%	28%	33%	38%	45%	5.2%	0.2%	0.6%	1.8%	1.3%	1.6%
<b>Industry (incl. non-energy use)</b>	<b>9</b>	<b>4</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>-7.9%</b>	<b>3.7%</b>	<b>-0.3%</b>	<b>0.4%</b>	<b>1.0%</b>	<b>0.6%</b>
Coal	1	1	1	1	1	1	1	-2.4%	1.3%	-0.5%	-0.2%	0.3%	1.6%
Oil	4	1	2	2	2	1	1	-15.1%	7.7%	-0.8%	-0.7%	-0.5%	-1.8%
Gas	1	1	1	1	1	1	1	-2.4%	-0.6%	-1.1%	0.7%	1.7%	-0.1%
Electricity	2	1	1	2	2	2	3	-7.8%	5.3%	1.1%	1.6%	1.8%	1.3%
Heat	0	0	0	0	0	0	0	-6.1%	9.0%	-2.6%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	0	0	0	0	0	0	n.s.	-3.4%	6.7%	2.3%	4.7%	4.7%
<b>Buildings</b>	<b>9</b>	<b>6</b>	<b>8</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>-3.1%</b>	<b>2.0%</b>	<b>0.7%</b>	<b>1.0%</b>	<b>1.3%</b>	<b>0.6%</b>
Coal	2	1	1	0	0	0	0	-12.7%	2.2%	-4.6%	-2.9%	-3.2%	-3.5%
Oil	1	1	1	0	0	0	0	-1.0%	1.1%	-2.9%	-2.7%	-1.8%	-2.1%
Gas	2	0	0	0	1	1	1	-14.8%	1.1%	2.5%	3.3%	1.7%	-0.7%
Electricity	2	3	3	4	4	5	5	3.1%	1.5%	0.5%	1.1%	1.7%	1.1%
Heat	0	0	1	1	1	1	2	0.0%	3.7%	1.5%	3.1%	2.4%	1.5%
Biomass & Other	2	2	2	3	3	3	3	-1.2%	2.8%	2.5%	0.8%	0.8%	0.2%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>11.2%</b>	<b>-3.1%</b>	<b>3.7%</b>	<b>1.0%</b>	<b>1.2%</b>	<b>1.0%</b>
Coal	0	0	0	0	0	0	0	2.3%	-29.6%	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	16.2%	-2.0%	4.8%	1.0%	1.1%	0.9%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	1.0%	0.8%	0.9%	0.7%
Electricity	0	0	0	0	0	0	0	5.0%	6.0%	-0.8%	1.8%	1.9%	1.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	-13.5%	10.6%	0.0%	0.0%	0.0%
<b>Transport</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>-1.0%</b>	<b>7.3%</b>	<b>-0.1%</b>	<b>0.4%</b>	<b>0.9%</b>	<b>0.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	2	5	5	4	4	4	-0.9%	7.3%	-0.4%	-1.0%	-0.2%	-0.6%
Gas	0	0	0	0	0	0	1	n.s.	n.s.	18.6%	19.0%	5.3%	2.4%
Electricity	0	0	0	0	0	1	1	-5.5%	3.9%	8.7%	15.5%	5.6%	2.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	15.3%	5.2%	3.0%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>-2.8%</b>	<b>6.5%</b>	<b>-1.8%</b>	<b>3.9%</b>	<b>2.6%</b>	<b>0.2%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Russia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	148	146	143	143	139	133	129	-0.1%	-0.2%	0.0%	-0.3%	-0.4%	-0.3%
GDP per capita (ppp, k\$'05)	13	9	14	16	20	24	25	-3.8%	5.1%	1.1%	2.4%	1.8%	0.4%
GDP per capita (mer, k\$'05)	6	4	6	7	9	10	11	-3.8%	5.1%	0.9%	2.4%	1.8%	0.4%
Share Value Added - Agriculture (%)	17	6	4	4	4	3	3	-9.0%	-5.0%	-0.1%	-0.7%	-0.4%	-0.1%
Share Value Added - Industry (%)	48	38	35	35	33	32	32	-2.4%	-0.9%	0.0%	-0.4%	-0.4%	-0.1%
Share Value Added - Services (%)	35	56	61	62	63	64	65	4.7%	1.0%	0.0%	0.2%	0.2%	0.0%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	17	19	-6.5%	7.4%	-4.3%	1.2%	2.1%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	18	21	30	38	52	70	93	1.4%	3.8%	2.2%	3.3%	3.0%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	3 486	1 702	1 699	1 686	2 017	2 334	2 486	-6.9%	0.0%	-0.1%	1.8%	1.5%	0.6%
Total GHG (excl. sinks)	3 486	2 161	2 318	2 121	2 249	2 395	2 542	-4.7%	0.7%	-0.9%	0.6%	0.6%	0.6%
Total GHG (energy, industry, agriculture)	3 359	2 145	2 305	2 116	2 249	2 395	2 393	-4.4%	0.7%	-0.9%	0.6%	0.6%	0.0%
CO <sub>2</sub>	2 476	1 550	1 650	1 485	1 579	1 665	1 638	-4.6%	0.6%	-1.1%	0.6%	0.5%	-0.2%
CH <sub>4</sub>	593	435	491	451	477	524	549	-3.1%	1.2%	-0.8%	0.5%	1.0%	0.5%
N <sub>2</sub> O	248	131	150	160	170	178	179	-6.2%	1.3%	0.6%	0.6%	0.5%	0.0%
F gases	41	29	14	20	24	27	26	-3.5%	-6.8%	3.6%	1.7%	1.1%	-0.1%
Total GHG from Energy and Industry	3 036	1 992	2 164	1 962	2 082	2 216	2 208	-4.1%	0.8%	-1.0%	0.6%	0.6%	0.0%
CO <sub>2</sub> Emissions from Fuel Comb.	2 343	1 474	1 545	1 387	1 481	1 569	1 551	-4.5%	0.5%	-1.1%	0.7%	0.6%	-0.1%
Power generation/District heating	795	586	623	513	554	595	611	-3.0%	0.6%	-1.9%	0.8%	0.7%	0.3%
Industry	272	196	214	215	235	248	241	-3.2%	0.9%	0.1%	0.9%	0.5%	-0.3%
Buildings	336	170	137	99	98	105	94	-6.6%	-2.1%	-3.2%	-0.2%	0.7%	-1.1%
Agriculture	49	21	14	13	15	16	16	-8.3%	-4.1%	-0.1%	0.8%	0.6%	0.2%
Transport	252	112	157	188	196	195	172	-7.8%	3.4%	1.8%	0.4%	0.0%	-1.3%
Other	640	389	400	359	384	410	418	-4.9%	0.3%	-1.1%	0.7%	0.7%	0.2%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	3.2%	4.1%	0.8%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	3.2%	4.1%	0.8%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	3.1%	4.0%	0.7%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	3.2%	4.2%	0.9%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	1 232	952	1 237	1 246	1 504	1 919	2 432	-2.5%	2.7%	0.1%	1.9%	2.5%	2.4%
Coal	177	138	174	199	312	597	1 069	-2.5%	2.4%	1.4%	4.6%	6.7%	6.0%
Oil	510	325	511	500	494	449	358	-4.4%	4.6%	-0.2%	-0.1%	-1.0%	-2.2%
Natural gas	491	436	488	469	608	771	904	-1.2%	1.1%	-0.4%	2.6%	2.4%	1.6%
Biomass	8	5	4	12	24	31	37	-5.5%	-0.9%	11.1%	6.9%	2.4%	1.8%
Nuclear <sup>1</sup>	31	35	45	48	47	48	35	1.0%	2.7%	0.6%	-0.1%	0.2%	-3.0%
Hydro	14	14	14	16	17	17	18	0.0%	0.2%	0.9%	0.4%	0.5%	0.6%
Other renewables	0	0	0	1	2	6	10	7.6%	24.2%	9.9%	7.9%	9.3%	5.4%
Net Imports	- 338	- 322	- 528	- 602	- 817	- 1 191	- 1 722						
Coal	18	- 5	- 51	- 57	- 137	- 397	- 838						
Oil	- 252	- 199	- 371	- 345	- 340	- 304	- 240						
Natural gas	- 103	- 117	- 104	- 193	- 329	- 480	- 635						
Biomass	0	0	0	- 5	- 8	- 5	- 4						
Biofuels	0	0	0	- 1	- 2	- 3	- 5						
Electricity	- 1	- 1	- 2	- 1	- 1	- 1	- 1						
Primary Energy Demand <sup>2</sup>	894	630	710	644	688	727	710	-3.4%	1.2%	-1.0%	0.7%	0.6%	-0.2%
Coal	195	133	123	142	175	200	232	-3.8%	-0.7%	1.4%	2.1%	1.4%	1.5%
Oil	258	126	140	155	154	145	118	-6.9%	1.1%	1.0%	-0.1%	-0.6%	-2.0%
Natural gas	388	319	384	276	279	291	269	-1.9%	1.9%	-3.2%	0.1%	0.4%	-0.8%
Biomass	8	5	4	7	17	25	33	-5.5%	-0.9%	5.7%	8.3%	4.3%	2.6%
Nuclear <sup>1</sup>	31	35	45	48	47	48	35	1.0%	2.7%	0.6%	-0.1%	0.2%	-3.0%
Hydro	14	14	14	16	17	17	18	0.0%	0.2%	0.9%	0.4%	0.5%	0.6%
Other renewables	0	0	0	1	2	6	10	7.6%	24.2%	9.9%	7.9%	9.3%	5.4%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	894	630	710	644	688	727	710	-3.4%	1.2%	-1.0%	0.7%	0.6%	-0.2%
Energy for Power Generation	325	252	286	240	250	265	258	-2.5%	1.2%	-1.7%	0.4%	0.6%	-0.3%
Other Energy Transformation & Losses	237	165	174	155	166	176	177	-3.6%	0.5%	-1.2%	0.7%	0.6%	0.1%
Final consumption	603	400	425	413	443	468	457	-4.0%	0.6%	-0.3%	0.7%	0.5%	-0.2%
Steel, Non-Met. Minerals and Chem.	102	78	91	92	105	113	119	-2.7%	1.6%	0.0%	1.4%	0.7%	0.5%
Other Industry	128	65	52	53	54	55	53	-6.5%	-2.2%	0.2%	0.1%	0.2%	-0.3%
Non-Energy Use	40	36	66	67	72	74	68	-1.0%	6.2%	0.1%	0.7%	0.3%	-0.8%
Residential	168	140	111	96	94	97	94	-1.8%	-2.3%	-1.5%	-0.2%	0.4%	-0.4%
Services	62	25	37	33	39	45	43	-8.7%	3.9%	-1.1%	1.7%	1.3%	-0.3%
Agriculture	22	9	6	6	7	7	7	-8.3%	-4.4%	0.0%	1.0%	0.8%	0.4%
Road	52	34	48	52	56	59	56	-4.1%	3.4%	0.7%	0.9%	0.5%	-0.6%
Rail	12	5	7	7	7	7	7	-7.6%	2.1%	0.5%	0.3%	0.0%	-0.5%
Aviation	9	5	5	6	7	8	7	-6.9%	1.5%	1.4%	1.6%	1.0%	-0.6%
Other Transport	7	1	1	2	2	2	2	-14.7%	-1.4%	6.2%	1.0%	0.0%	-1.3%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Russia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>279</b>	<b>204</b>	<b>226</b>	<b>176</b>	<b>184</b>	<b>194</b>	<b>194</b>	<b>-3.1%</b>	<b>1.0%</b>	<b>-2.5%</b>	<b>0.5%</b>	<b>0.5%</b>	<b>0.0%</b>
Coal	63	63	59	65	80	93	104	0.0%	-0.6%	1.0%	2.0%	1.6%	1.1%
Oil	46	12	4	1	3	1	1	-12.6%	-10.2%	-10.5%	6.9%	-6.8%	-8.5%
Gas	170	127	160	107	98	94	84	-2.9%	2.4%	-4.0%	-0.8%	-0.4%	-1.1%
Biomass & Waste	0	2	2	3	4	5	6	29.4%	1.7%	2.8%	4.6%	3.0%	1.4%
Other	0	0	0	0	0	0	0	7.6%	24.2%	8.3%	4.0%	0.6%	2.4%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>1 082</b>	<b>878</b>	<b>1 038</b>	<b>988</b>	<b>1 133</b>	<b>1 273</b>	<b>1 298</b>	<b>-2.1%</b>	<b>1.7%</b>	<b>-0.5%</b>	<b>1.4%</b>	<b>1.2%</b>	<b>0.2%</b>
Coal	157	176	166	223	308	383	436	1.1%	-0.6%	3.0%	3.3%	2.2%	1.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	129	33	9	6	11	6	2	-12.7%	-11.9%	-4.6%	6.8%	-6.7%	-8.3%
Gas	512	370	521	385	418	442	419	-3.2%	3.5%	-3.0%	0.8%	0.6%	-0.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	3	3	5	13	21	26	52.6%	0.9%	6.7%	9.7%	4.6%	2.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	118	131	170	181	178	187	140	1.0%	2.7%	0.6%	-0.1%	0.5%	-2.8%
Hydro	166	165	168	185	192	201	214	0.0%	0.2%	0.9%	0.4%	0.5%	0.6%
Wind	0	0	0	2	9	25	44	n.s.	25.7%	55.9%	17.9%	11.2%	5.8%
Solar	0	0	0	0	2	6	13	n.s.	n.s.	n.s.	24.3%	13.0%	8.2%
Other	0	0	1	1	2	2	3	7.6%	24.2%	8.3%	4.4%	1.8%	4.3%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>254</b>	<b>211</b>	<b>231</b>	<b>226</b>	<b>230</b>	<b>266</b>	<b>292</b>	<b>-1.9%</b>	<b>0.9%</b>	<b>-0.2%</b>	<b>0.2%</b>	<b>1.5%</b>	<b>0.9%</b>
Coal	42	42	42	42	53	68	77	0.0%	0.0%	-0.1%	2.3%	2.7%	1.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	121	16	16	18	14	12	11	-18.3%	0.0%	1.3%	-2.5%	-1.6%	-0.8%
Gas	91	88	104	90	81	90	97	-0.3%	1.7%	-1.4%	-1.0%	1.0%	0.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	1	1	1	2	3	4	36.8%	0.0%	2.7%	9.0%	5.0%	2.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	20	23	24	24	24	18	n.s.	1.3%	0.7%	-0.3%	0.3%	-3.0%
Hydro	0	44	45	49	51	54	57	n.s.	0.2%	0.9%	0.4%	0.5%	0.6%
Wind	0	0	0	1	4	10	18	n.s.	19.6%	54.6%	17.8%	11.0%	5.6%
Solar	0	0	0	0	1	5	10	n.s.	n.s.	n.s.	24.5%	12.8%	8.2%
Other	0	0	0	0	0	0	0	n.s.	14.6%	6.8%	4.1%	1.4%	3.6%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>603</b>	<b>400</b>	<b>425</b>	<b>413</b>	<b>443</b>	<b>468</b>	<b>457</b>	<b>-4.0%</b>	<b>0.6%</b>	<b>-0.3%</b>	<b>0.7%</b>	<b>0.5%</b>	<b>-0.2%</b>
Coal	68	29	28	34	44	51	60	-8.3%	-0.2%	1.8%	2.7%	1.4%	1.7%
Oil	145	91	109	119	118	114	98	-4.6%	1.9%	0.9%	-0.1%	-0.3%	-1.5%
Gas	110	90	110	91	100	111	105	-2.0%	2.0%	-1.9%	1.0%	1.0%	-0.5%
Electricity	68	50	60	58	67	75	77	-2.9%	1.8%	-0.4%	1.4%	1.2%	0.2%
Heat	203	137	115	107	104	103	101	-3.9%	-1.8%	-0.7%	-0.2%	-0.1%	-0.2%
Biomass & Other	8	3	2	5	10	13	16	-9.3%	-2.5%	8.2%	6.7%	3.0%	1.8%
Share of Renewables <sup>3</sup> (%)	6%	8%	7%	8%	9%	11%	13%	2.1%	-0.9%	1.3%	1.4%	1.5%	1.9%
<b>Industry (incl. non-energy use)</b>	<b>270</b>	<b>179</b>	<b>210</b>	<b>211</b>	<b>230</b>	<b>242</b>	<b>241</b>	<b>-4.0%</b>	<b>1.6%</b>	<b>0.1%</b>	<b>0.9%</b>	<b>0.5%</b>	<b>0.0%</b>
Coal	28	19	24	31	42	49	58	-3.9%	2.6%	2.5%	3.0%	1.6%	1.8%
Oil	44	36	43	47	46	44	39	-2.0%	1.9%	0.9%	-0.1%	-0.4%	-1.3%
Gas	52	43	66	63	68	71	66	-1.9%	4.5%	-0.6%	0.8%	0.5%	-0.8%
Electricity	41	27	28	26	30	33	35	-4.2%	0.5%	-0.7%	1.3%	1.2%	0.4%
Heat	105	55	48	44	42	41	39	-6.4%	-1.4%	-0.9%	-0.3%	-0.4%	-0.4%
Biomass & Other	0	1	0	1	3	3	4	n.s.	-2.9%	9.7%	9.5%	2.2%	2.3%
<b>Buildings</b>	<b>231</b>	<b>166</b>	<b>148</b>	<b>129</b>	<b>133</b>	<b>142</b>	<b>137</b>	<b>-3.3%</b>	<b>-1.1%</b>	<b>-1.4%</b>	<b>0.3%</b>	<b>0.6%</b>	<b>-0.4%</b>
Coal	40	10	4	2	2	1	1	-13.1%	-8.8%	-4.6%	-2.3%	-2.6%	-2.9%
Oil	14	7	6	8	6	5	4	-7.0%	-0.6%	2.6%	-2.9%	-2.1%	-3.0%
Gas	57	47	43	27	30	36	33	-1.9%	-0.8%	-4.6%	1.1%	1.7%	-0.7%
Electricity	15	18	26	25	28	31	30	1.7%	3.8%	-0.3%	1.2%	1.0%	-0.3%
Heat	98	82	67	63	62	62	62	-1.7%	-2.0%	-0.6%	-0.2%	0.1%	-0.1%
Biomass & Other	7	2	2	4	5	7	7	-10.8%	-2.6%	7.6%	4.0%	2.0%	0.7%
<b>Agriculture</b>	<b>22</b>	<b>9</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>-8.3%</b>	<b>-4.4%</b>	<b>0.0%</b>	<b>1.0%</b>	<b>0.8%</b>	<b>0.4%</b>
Coal	1	0	0	0	0	0	0	-7.1%	-11.5%	-3.8%	0.0%	0.0%	0.0%
Oil	14	6	4	4	4	4	4	-8.7%	-4.2%	-0.1%	0.9%	0.7%	0.2%
Gas	1	1	1	1	1	1	1	-0.8%	0.9%	0.5%	0.7%	0.5%	0.0%
Electricity	6	3	1	1	2	2	2	-7.7%	-6.2%	0.1%	1.7%	1.5%	1.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	0	0	0	0	0	0	-15.8%	1.1%	0.0%	0.0%	0.0%	0.0%
<b>Transport</b>	<b>80</b>	<b>46</b>	<b>61</b>	<b>67</b>	<b>73</b>	<b>77</b>	<b>72</b>	<b>-5.4%</b>	<b>3.0%</b>	<b>0.9%</b>	<b>0.9%</b>	<b>0.5%</b>	<b>-0.6%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	73	42	56	61	62	61	52	-5.3%	2.8%	0.8%	0.2%	-0.2%	-1.6%
Gas	1	0	0	0	2	4	6	-23.1%	3.4%	10.6%	20.6%	6.0%	4.6%
Electricity	6	3	5	6	7	9	10	-5.5%	4.5%	0.8%	2.8%	2.0%	1.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	2	3	5	n.s.	n.s.	n.s.	19.5%	7.0%	3.4%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>237</b>	<b>165</b>	<b>174</b>	<b>155</b>	<b>166</b>	<b>176</b>	<b>177</b>	<b>-3.6%</b>	<b>0.5%</b>	<b>-1.2%</b>	<b>0.7%</b>	<b>0.6%</b>	<b>0.1%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Ukraine	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	51	49	46	44	41	38	35	-0.5%	-0.7%	-0.4%	-0.7%	-0.8%	-0.7%
GDP per capita (ppp, k\$'05)	8	4	6	7	10	15	21	-7.5%	5.0%	1.0%	4.1%	3.9%	3.5%
GDP per capita (mer, k\$'05)	3	1	2	2	3	5	7	-7.5%	5.0%	0.7%	4.1%	3.9%	3.5%
Share Value Added - Agriculture (%)	26	17	8	9	7	6	5	-4.0%	-7.0%	0.8%	-2.5%	-1.6%	-1.0%
Share Value Added - Industry (%)	45	36	31	27	27	26	24	-2.0%	-1.5%	-1.4%	-0.2%	-0.4%	-0.5%
Share Value Added - Services (%)	30	47	60	64	66	68	70	4.6%	2.6%	0.6%	0.4%	0.3%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	17	19	-6.5%	7.4%	-4.3%	1.2%	2.1%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	18	21	30	38	52	70	93	1.4%	3.8%	2.2%	3.3%	3.0%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	837	358	330	270	337	407	541	-8.1%	-0.8%	-2.0%	2.2%	1.9%	2.9%
Total GHG (excl. sinks)	907	409	368	295	358	426	558	-7.7%	-1.1%	-2.2%	2.0%	1.7%	2.7%
Total GHG (energy, industry, agriculture)	907	409	368	295	358	426	558	-7.7%	-1.1%	-2.2%	2.0%	1.7%	2.7%
CO <sub>2</sub>	685	290	272	209	269	336	481	-8.2%	-0.6%	-2.6%	2.6%	2.2%	3.7%
CH <sub>4</sub>	162	93	66	54	54	53	40	-5.4%	-3.3%	-2.1%	0.0%	-0.2%	-2.8%
N <sub>2</sub> O	59	26	29	32	35	36	37	-7.7%	0.9%	1.0%	0.8%	0.4%	0.2%
F gases	0	0	1	1	1	1	1	-5.6%	17.0%	1.4%	2.9%	1.9%	1.3%
Total GHG from Energy and Industry	803	372	334	257	318	384	516	-7.4%	-1.1%	-2.6%	2.1%	1.9%	3.0%
CO <sub>2</sub> Emissions from Fuel Comb.	647	271	253	191	248	311	451	-8.3%	-0.7%	-2.8%	2.6%	2.3%	3.8%
Power generation/District heating	216	79	94	72	104	120	190	-9.6%	1.8%	-2.7%	3.7%	1.5%	4.7%
Industry	133	48	41	35	55	93	148	-9.6%	-1.5%	-1.8%	4.7%	5.5%	4.7%
Buildings	60	44	37	25	22	19	17	-3.0%	-1.8%	-3.6%	-1.4%	-1.4%	-1.4%
Agriculture	23	3	4	4	5	5	6	-17.2%	2.4%	-0.4%	1.0%	1.1%	1.1%
Transport	53	17	30	26	27	28	26	-10.6%	5.5%	-1.4%	0.4%	0.3%	-0.5%
Other	161	78	47	29	36	45	64	-7.0%	-5.1%	-4.6%	2.2%	2.2%	3.6%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	6.1%	6.8%	11.2%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	6.2%	6.5%	10.9%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	6.7%	11.3%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	5.7%	7.2%	11.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	109	73	80	82	97	116	84	-3.9%	0.9%	0.2%	1.7%	1.8%	-3.2%
Coal	62	34	35	36	44	47	13	-5.7%	0.3%	0.2%	2.0%	0.7%	-12.0%
Oil	5	4	4	4	4	3	2	-3.4%	-0.4%	0.6%	-0.3%	-1.2%	-3.1%
Natural gas	21	13	15	15	16	18	20	-4.5%	1.4%	-0.1%	0.5%	1.1%	0.9%
Biomass	0	0	1	1	2	2	3	-2.2%	18.6%	-0.7%	1.9%	3.2%	2.3%
Nuclear <sup>1</sup>	20	20	24	23	29	41	40	0.2%	1.4%	-0.1%	2.1%	3.7%	-0.3%
Hydro	1	1	1	1	1	1	1	0.7%	1.4%	0.1%	0.9%	0.1%	0.1%
Other renewables	0	0	0	1	1	3	5	n.s.	n.s.	43.4%	6.6%	9.2%	4.3%
Net Imports	157	61	58	20	39	76	183						
Coal	27	4	9	3	20	59	164						
Oil	62	8	10	7	9	11	12						
Natural gas	71	49	40	11	11	7	8						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	-2	0	0	-1	-1	-1	-1						
Primary Energy Demand <sup>2</sup>	266	134	138	101	136	192	267	-6.6%	0.3%	-3.1%	3.0%	3.5%	3.4%
Coal	88	39	44	39	65	106	177	-7.9%	1.4%	-1.3%	5.2%	5.1%	5.3%
Oil	67	12	13	11	13	14	15	-15.8%	1.0%	-2.0%	1.5%	1.1%	0.4%
Natural gas	92	62	55	26	27	25	27	-3.8%	-1.2%	-7.3%	0.3%	-0.7%	0.9%
Biomass	0	0	1	1	2	2	3	-2.2%	18.4%	-0.5%	2.5%	2.8%	2.2%
Nuclear <sup>1</sup>	20	20	24	23	29	41	40	0.2%	1.4%	-0.1%	2.1%	3.7%	-0.3%
Hydro	1	1	1	1	1	1	1	0.7%	1.4%	0.1%	0.9%	0.1%	0.1%
Other renewables	0	0	0	1	1	3	5	n.s.	n.s.	43.4%	6.6%	9.2%	4.3%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	266	134	138	101	136	192	267	-6.6%	0.3%	-3.1%	3.0%	3.5%	3.4%
Energy for Power Generation	83	45	51	46	60	79	98	-6.0%	1.4%	-1.2%	2.8%	2.7%	2.2%
Other Energy Transformation & Losses	68	37	34	14	18	25	35	-5.9%	-0.8%	-8.8%	3.1%	3.1%	3.6%
Final consumption	163	75	77	64	84	123	176	-7.4%	0.2%	-1.8%	2.8%	3.8%	3.7%
Steel, Non-Met. Minerals and Chem.	29	14	24	21	38	72	122	-6.9%	5.2%	-1.3%	6.1%	6.6%	5.4%
Other Industry	61	24	8	6	7	7	8	-8.8%	-10.4%	-2.7%	1.2%	0.8%	0.4%
Non-Energy Use	6	1	6	4	5	6	6	-15.4%	16.5%	-3.8%	2.1%	1.9%	1.2%
Residential	32	24	24	19	18	18	17	-2.8%	-0.1%	-2.5%	-0.3%	-0.1%	-0.3%
Services	4	3	5	5	6	7	9	-3.3%	6.4%	-0.3%	2.6%	2.2%	1.7%
Agriculture	9	2	2	2	2	2	2	-16.6%	1.2%	0.0%	1.2%	1.2%	1.2%
Road	18	6	8	7	8	9	10	-9.6%	2.5%	-1.1%	1.1%	1.2%	0.6%
Rail	2	1	1	1	1	1	1	-6.9%	-0.5%	-1.1%	1.7%	1.5%	1.2%
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other Transport	1	0	0	0	0	0	0	n.s.	n.s.	-7.1%	2.4%	1.6%	1.3%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Ukraine	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>62</b>	<b>23</b>	<b>27</b>	<b>20</b>	<b>29</b>	<b>33</b>	<b>52</b>	<b>-9.3%</b>	<b>1.4%</b>	<b>-2.7%</b>	<b>3.6%</b>	<b>1.3%</b>	<b>4.6%</b>
Coal	37	15	20	15	21	26	42	-8.6%	2.9%	-2.9%	3.7%	2.0%	4.9%
Oil	13	0	0	1	1	2	2	-30.9%	0.3%	6.0%	8.4%	1.6%	2.7%
Gas	12	8	6	5	6	5	8	-4.2%	-2.5%	-2.5%	2.5%	-1.6%	3.7%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	-6.5%	2.6%	1.7%	4.4%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>299</b>	<b>171</b>	<b>189</b>	<b>187</b>	<b>266</b>	<b>361</b>	<b>469</b>	<b>-5.4%</b>	<b>1.0%</b>	<b>-0.1%</b>	<b>3.6%</b>	<b>3.1%</b>	<b>2.6%</b>
Coal	114	52	70	57	94	123	204	-7.6%	3.0%	-2.0%	5.2%	2.7%	5.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	48	1	1	3	6	7	9	-30.9%	-3.6%	11.9%	8.6%	1.8%	2.8%
Gas	50	30	16	17	27	29	41	-5.0%	-6.3%	1.0%	4.6%	0.5%	3.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	1	2	n.s.	n.s.	2.4%	3.1%	11.5%	7.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	76	77	89	89	110	162	160	0.2%	1.4%	-0.1%	2.2%	3.9%	-0.1%
Hydro	11	11	13	13	14	14	15	0.7%	1.4%	0.1%	0.9%	0.1%	0.1%
Wind	0	0	0	5	8	18	30	n.s.	42.9%	37.3%	5.2%	8.0%	5.1%
Solar	0	0	0	3	6	7	9	n.s.	n.s.	n.s.	6.2%	1.7%	3.0%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.7%	13.9%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>80</b>	<b>52</b>	<b>54</b>	<b>41</b>	<b>56</b>	<b>77</b>	<b>94</b>	<b>-4.1%</b>	<b>0.3%</b>	<b>-2.6%</b>	<b>3.1%</b>	<b>3.2%</b>	<b>2.0%</b>
Coal	22	22	22	9	16	24	33	-0.1%	0.0%	-8.1%	5.4%	4.0%	3.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	45	1	1	1	1	2	2	-32.0%	0.0%	-5.9%	7.8%	4.8%	1.6%
Gas	12	14	12	8	9	9	10	1.2%	-1.0%	-4.2%	0.8%	1.0%	0.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	1.9%	-0.7%	9.3%	7.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	11	13	13	16	23	22	n.s.	1.6%	-0.1%	2.0%	3.7%	-0.3%
Hydro	0	5	5	6	6	6	6	n.s.	1.5%	0.4%	0.8%	0.1%	0.1%
Wind	0	0	0	2	3	7	12	n.s.	n.s.	35.8%	5.1%	7.9%	4.9%
Solar	0	0	0	3	5	5	7	n.s.	n.s.	n.s.	6.2%	1.6%	2.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.2%	13.4%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>163</b>	<b>75</b>	<b>77</b>	<b>64</b>	<b>84</b>	<b>123</b>	<b>176</b>	<b>-7.4%</b>	<b>0.2%</b>	<b>-1.8%</b>	<b>2.8%</b>	<b>3.8%</b>	<b>3.7%</b>
Coal	39	16	15	15	30	60	106	-8.5%	-0.9%	0.3%	7.2%	7.3%	5.8%
Oil	43	11	12	11	12	13	13	-13.0%	1.5%	-1.4%	1.0%	1.0%	0.0%
Gas	33	26	25	15	14	14	13	-2.6%	-0.2%	-5.0%	-0.6%	-0.3%	-0.5%
Electricity	18	10	11	11	16	22	29	-5.8%	1.7%	-0.1%	3.8%	3.2%	2.7%
Heat	31	13	12	10	10	11	11	-8.0%	-0.6%	-2.0%	0.1%	0.8%	0.2%
Biomass & Other	0	0	1	1	2	2	3	-2.2%	14.7%	4.1%	1.3%	2.3%	2.1%
Share of Renewables <sup>3</sup> (%)	2%	3%	4%	6%	6%	6%	5%	2.9%	4.7%	3.2%	-0.4%	0.4%	-0.9%
<b>Industry (incl. non-energy use)</b>	<b>97</b>	<b>40</b>	<b>37</b>	<b>31</b>	<b>49</b>	<b>85</b>	<b>136</b>	<b>-8.5%</b>	<b>-0.6%</b>	<b>-1.9%</b>	<b>4.8%</b>	<b>5.6%</b>	<b>4.8%</b>
Coal	30	13	14	14	29	60	106	-7.8%	0.5%	0.3%	7.4%	7.4%	5.9%
Oil	15	2	2	2	2	3	4	-16.8%	-0.4%	-2.9%	2.9%	3.3%	1.5%
Gas	23	12	11	6	6	7	7	-6.5%	-1.2%	-6.1%	1.0%	0.9%	-0.2%
Electricity	13	5	6	5	7	11	16	-8.4%	0.9%	-1.4%	4.1%	4.1%	3.6%
Heat	16	7	5	4	4	4	4	-8.0%	-3.6%	-1.7%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	2.2%	9.2%	9.5%	3.8%
<b>Buildings</b>	<b>36</b>	<b>27</b>	<b>28</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>-2.9%</b>	<b>0.7%</b>	<b>-2.1%</b>	<b>0.3%</b>	<b>0.5%</b>	<b>0.3%</b>
Coal	8	3	1	1	1	1	0	-9.9%	-13.3%	0.3%	-1.0%	-1.3%	-1.6%
Oil	2	0	0	0	1	1	1	-13.8%	-8.9%	7.1%	6.8%	2.0%	0.6%
Gas	10	14	14	9	8	6	5	3.2%	0.5%	-4.3%	-1.9%	-1.8%	-1.7%
Electricity	1	3	5	5	8	9	11	8.5%	3.7%	1.2%	3.5%	2.1%	1.7%
Heat	14	6	8	6	6	7	7	-8.1%	2.1%	-2.2%	0.2%	1.4%	0.5%
Biomass & Other	0	0	1	1	1	1	1	-2.2%	14.0%	3.6%	-0.9%	-1.2%	-0.9%
<b>Agriculture</b>	<b>9</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>-16.6%</b>	<b>1.2%</b>	<b>0.0%</b>	<b>1.2%</b>	<b>1.2%</b>	<b>1.2%</b>
Coal	1	0	0	0	0	0	0	n.s.	n.s.	-3.9%	0.0%	0.0%	0.0%
Oil	6	1	1	1	1	2	2	-15.7%	1.5%	-0.4%	1.1%	1.1%	1.1%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	-0.1%	0.9%	0.9%	0.9%
Electricity	2	0	0	0	0	0	1	-15.9%	-4.2%	1.6%	1.9%	1.9%	1.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	2.3%	0.0%	0.0%	0.0%
<b>Transport</b>	<b>21</b>	<b>7</b>	<b>9</b>	<b>8</b>	<b>9</b>	<b>11</b>	<b>11</b>	<b>-9.9%</b>	<b>2.3%</b>	<b>-1.1%</b>	<b>1.2%</b>	<b>1.2%</b>	<b>0.6%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	-9.8%	0.0%	0.0%	0.0%
Oil	20	7	9	7	8	8	7	-10.3%	2.4%	-1.3%	0.2%	0.0%	-1.0%
Gas	0	0	0	0	0	1	1	n.s.	n.s.	0.8%	18.2%	7.1%	5.9%
Electricity	1	1	1	1	1	2	2	-4.7%	0.1%	0.3%	4.7%	3.6%	2.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	14.0%	7.9%	5.1%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>68</b>	<b>37</b>	<b>34</b>	<b>14</b>	<b>18</b>	<b>25</b>	<b>35</b>	<b>-5.9%</b>	<b>-0.8%</b>	<b>-8.8%</b>	<b>3.1%</b>	<b>3.1%</b>	<b>3.6%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Other CIS	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	77	81	88	98	105	110	114	0.5%	0.8%	1.1%	0.7%	0.5%	0.3%
GDP per capita (ppp, k\$'05)	5	3	6	10	15	21	27	-4.0%	7.5%	4.3%	4.5%	3.4%	2.4%
GDP per capita (mer, k\$'05)	2	1	2	4	6	8	10	-4.1%	7.4%	4.3%	4.5%	3.4%	2.4%
Share Value Added - Agriculture (%)	20	20	9	7	6	6	5	-0.4%	-7.5%	-2.0%	-1.8%	-0.9%	-0.5%
Share Value Added - Industry (%)	26	35	43	41	40	37	35	2.9%	2.1%	-0.5%	-0.4%	-0.6%	-0.5%
Share Value Added - Services (%)	53	45	48	51	54	57	59	-1.6%	0.6%	0.7%	0.6%	0.5%	0.4%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	17	19	-6.5%	7.4%	-4.3%	1.2%	2.1%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	18	21	30	38	52	70	93	1.4%	3.8%	2.2%	3.3%	3.0%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	941	556	750	1 011	1 353	1 587	1 648	-5.1%	3.0%	3.0%	3.0%	1.6%	0.4%
Total GHG (excl. sinks)	969	598	810	1 065	1 398	1 625	1 681	-4.7%	3.1%	2.8%	2.8%	1.5%	0.3%
Total GHG (energy, industry, agriculture)	969	596	800	1 055	1 388	1 616	1 672	-4.7%	3.0%	2.8%	2.8%	1.5%	0.3%
CO <sub>2</sub>	723	417	547	761	1 046	1 236	1 281	-5.4%	2.8%	3.4%	3.2%	1.7%	0.4%
CH <sub>4</sub>	174	133	193	227	266	297	304	-2.6%	3.8%	1.6%	1.6%	1.1%	0.3%
N <sub>2</sub> O	69	45	56	61	66	70	70	-4.2%	2.3%	0.8%	0.9%	0.5%	0.0%
F gases	3	1	3	5	9	13	17	-9.0%	10.0%	6.0%	5.2%	3.8%	2.6%
Total GHG from Energy and Industry	843	513	689	940	1 267	1 490	1 546	-4.9%	3.0%	3.2%	3.0%	1.6%	0.4%
CO <sub>2</sub> Emissions from Fuel Comb.	688	384	500	693	946	1 123	1 178	-5.7%	2.7%	3.3%	3.2%	1.7%	0.5%
Power generation/District heating	248	152	165	218	303	386	451	-4.8%	0.8%	2.8%	3.4%	2.4%	1.6%
Industry	140	58	88	160	258	281	235	-8.4%	4.2%	6.1%	4.9%	0.9%	-1.8%
Buildings	159	83	104	128	152	181	199	-6.3%	2.3%	2.1%	1.7%	1.8%	1.0%
Agriculture	13	8	8	10	11	13	15	-4.2%	-0.4%	2.0%	1.7%	1.4%	1.1%
Transport	56	27	41	54	58	61	59	-6.9%	4.1%	2.9%	0.6%	0.5%	-0.3%
Other	73	55	95	123	163	201	219	-2.7%	5.5%	2.7%	2.9%	2.1%	0.8%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	8.7%	3.5%	-0.2%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	8.6%	3.4%	-0.2%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	8.7%	3.4%	-0.3%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	8.9%	3.5%	-0.2%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	224	200	316	421	590	785	847	-1.1%	4.7%	2.9%	3.4%	2.9%	0.8%
Coal	56	38	53	78	117	216	215	-3.8%	3.3%	3.9%	4.1%	6.3%	0.0%
Oil	52	67	149	199	230	233	231	2.5%	8.3%	2.9%	1.5%	0.1%	-0.1%
Natural gas	110	88	106	135	231	322	383	-2.2%	1.9%	2.4%	5.5%	3.4%	1.8%
Biomass	1	1	2	4	5	6	7	5.2%	0.9%	8.7%	3.4%	1.5%	1.0%
Nuclear <sup>1</sup>	0	1	1	1	1	2	3	n.s.	2.2%	0.1%	4.6%	5.3%	4.0%
Hydro	4	4	5	5	5	5	5	-0.6%	2.3%	-0.4%	0.0%	0.1%	0.2%
Other renewables	0	0	0	0	1	2	5	n.s.	n.s.	52.3%	22.2%	12.9%	9.3%
Net Imports	26	-49	-128	-159	-232	-352	-389						
Coal	-3	-14	-15	-19	-26	-112	-107						
Oil	41	-31	-115	-149	-177	-177	-178						
Natural gas	-14	-5	2	8	-34	-73	-117						
Biomass	0	0	0	2	6	9	11						
Biofuels	0	0	0	0	0	0	1						
Electricity	1	1	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	250	150	188	263	359	432	458	-4.9%	2.3%	3.4%	3.2%	1.9%	0.6%
Coal	53	24	38	59	91	104	108	-7.6%	4.8%	4.4%	4.5%	1.3%	0.4%
Oil	94	36	35	50	54	56	53	-9.1%	-0.3%	3.7%	0.7%	0.4%	-0.5%
Natural gas	96	84	108	143	197	249	266	-1.4%	2.6%	2.8%	3.3%	2.4%	0.7%
Biomass	1	1	2	5	11	15	17	5.1%	0.9%	12.7%	7.4%	3.3%	1.6%
Nuclear <sup>1</sup>	0	1	1	1	1	2	3	n.s.	2.2%	0.1%	4.6%	5.3%	4.0%
Hydro	4	4	5	5	5	5	5	-0.6%	2.3%	-0.4%	0.0%	0.1%	0.2%
Other renewables	0	0	0	0	1	2	5	n.s.	n.s.	52.3%	22.2%	12.9%	9.3%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	250	150	188	263	359	432	458	-4.9%	2.3%	3.4%	3.2%	1.9%	0.6%
Energy for Power Generation	84	56	63	81	112	139	162	-4.0%	1.1%	2.6%	3.3%	2.2%	1.5%
Other Energy Transformation & Losses	28	22	36	50	70	87	94	-2.1%	4.9%	3.3%	3.3%	2.3%	0.7%
Final consumption	189	100	121	171	230	274	282	-6.1%	1.9%	3.5%	3.0%	1.7%	0.3%
Steel, Non-Met. Minerals and Chem.	8	6	13	27	53	58	44	-3.4%	8.7%	7.5%	6.9%	0.9%	-2.8%
Other Industry	51	23	26	36	46	55	61	-7.8%	1.2%	3.4%	2.5%	2.0%	0.9%
Non-Energy Use	15	7	6	8	10	13	14	-7.7%	-1.9%	3.7%	2.8%	2.0%	0.6%
Residential	14	27	30	38	43	50	54	7.2%	1.0%	2.3%	1.3%	1.4%	0.7%
Services	72	22	25	34	45	59	68	-11.2%	1.4%	3.0%	2.8%	2.7%	1.5%
Agriculture	8	5	5	6	7	9	10	-5.1%	-0.4%	2.3%	2.2%	1.9%	1.6%
Road	18	9	14	19	22	25	27	-6.5%	4.4%	3.0%	1.4%	1.4%	0.7%
Rail	2	1	1	1	2	2	2	-7.3%	1.2%	2.4%	2.1%	1.5%	0.9%
Aviation	1	0	0	1	1	1	2	-1.0%	-1.0%	4.6%	4.5%	3.3%	0.7%
Other Transport	0	0	0	0	0	0	0	-7.8%	2.9%	4.9%	4.1%	2.4%	1.2%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Other CIS	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>80</b>	<b>51</b>	<b>57</b>	<b>75</b>	<b>105</b>	<b>130</b>	<b>149</b>	<b>-4.3%</b>	<b>1.0%</b>	<b>2.8%</b>	<b>3.4%</b>	<b>2.2%</b>	<b>1.4%</b>
Coal	28	16	19	27	38	50	65	-5.5%	2.0%	3.6%	3.4%	2.7%	2.7%
Oil	19	7	1	3	4	4	3	-9.8%	-19.6%	15.2%	1.7%	-0.6%	-0.5%
Gas	32	29	37	42	59	75	78	-1.2%	2.5%	1.5%	3.4%	2.4%	0.3%
Biomass & Waste	0	0	0	2	3	1	3	n.s.	n.s.	35.4%	5.7%	-9.7%	9.3%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>295</b>	<b>201</b>	<b>256</b>	<b>357</b>	<b>551</b>	<b>737</b>	<b>879</b>	<b>-3.8%</b>	<b>2.4%</b>	<b>3.4%</b>	<b>4.4%</b>	<b>3.0%</b>	<b>1.8%</b>
Coal	73	38	69	100	166	238	320	-6.3%	6.1%	3.7%	5.1%	3.7%	3.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	53	23	2	14	16	15	15	-8.1%	-19.9%	18.8%	1.6%	-0.6%	-0.3%
Gas	116	88	119	178	296	399	425	-2.7%	3.0%	4.1%	5.2%	3.0%	0.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	2	4	3	14	n.s.	n.s.	37.8%	5.7%	-2.8%	17.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	2	2	3	4	7	11	n.s.	2.2%	0.0%	4.9%	5.7%	4.2%
Hydro	52	49	62	59	60	60	61	-0.6%	2.3%	-0.4%	0.0%	0.1%	0.2%
Wind	0	0	0	1	4	12	26	n.s.	n.s.	50.0%	18.9%	11.4%	7.6%
Solar	0	0	0	0	1	3	7	n.s.	n.s.	n.s.	24.7%	14.5%	10.4%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	30.8%	19.6%	14.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>88</b>	<b>66</b>	<b>72</b>	<b>71</b>	<b>97</b>	<b>134</b>	<b>168</b>	<b>-2.8%</b>	<b>0.9%</b>	<b>-0.2%</b>	<b>3.2%</b>	<b>3.2%</b>	<b>2.3%</b>
Coal	15	15	15	15	25	37	49	-0.4%	0.3%	0.1%	5.0%	4.0%	2.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	50	7	7	6	3	3	4	-17.6%	-0.4%	-2.2%	-4.6%	-0.8%	1.5%
Gas	23	29	32	33	49	69	79	2.5%	1.2%	0.0%	4.2%	3.4%	1.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	1	1	1	0	2	n.s.	n.s.	1.8%	0.0%	-3.9%	17.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	1	1	2	n.s.	0.0%	-0.1%	4.7%	5.4%	4.0%
Hydro	0	15	17	17	17	17	17	n.s.	1.0%	-0.2%	0.0%	0.1%	0.2%
Wind	0	0	0	0	2	5	10	n.s.	n.s.	48.8%	18.7%	11.2%	7.5%
Solar	0	0	0	0	1	2	5	n.s.	n.s.	n.s.	24.6%	14.4%	10.4%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	19.0%	13.9%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>189</b>	<b>100</b>	<b>121</b>	<b>171</b>	<b>230</b>	<b>274</b>	<b>282</b>	<b>-6.1%</b>	<b>1.9%</b>	<b>3.5%</b>	<b>3.0%</b>	<b>1.7%</b>	<b>0.3%</b>
Coal	23	7	17	28	48	49	37	-11.3%	9.3%	5.1%	5.3%	0.2%	-2.7%
Oil	60	24	30	39	41	43	41	-8.8%	2.1%	2.7%	0.6%	0.4%	-0.5%
Gas	53	39	41	60	82	103	114	-2.9%	0.4%	3.9%	3.1%	2.4%	1.0%
Electricity	23	13	16	24	36	48	58	-5.0%	2.0%	3.6%	4.4%	3.0%	1.8%
Heat	29	15	15	15	15	16	17	-6.4%	0.0%	0.1%	0.0%	0.2%	0.6%
Biomass & Other	1	1	1	5	8	14	15	5.1%	-0.1%	12.3%	6.2%	5.3%	0.8%
Share of Renewables <sup>3</sup> (%)	5%	7%	7%	6%	6%	7%	9%	4.3%	-0.6%	-1.9%	0.4%	2.4%	1.9%
<b>Industry (incl. non-energy use)</b>	<b>74</b>	<b>35</b>	<b>44</b>	<b>71</b>	<b>109</b>	<b>126</b>	<b>118</b>	<b>-7.2%</b>	<b>2.4%</b>	<b>4.8%</b>	<b>4.4%</b>	<b>1.5%</b>	<b>-0.7%</b>
Coal	19	6	12	24	43	45	34	-10.6%	7.0%	6.8%	6.3%	0.4%	-2.9%
Oil	22	7	6	9	11	12	11	-11.1%	-0.7%	3.2%	2.0%	1.1%	-0.3%
Gas	12	11	13	23	32	39	39	-1.0%	1.3%	6.0%	3.5%	2.1%	0.0%
Electricity	13	6	8	11	18	24	27	-8.1%	3.4%	3.5%	4.9%	2.9%	1.4%
Heat	8	5	5	4	4	4	4	-3.8%	-0.2%	-1.9%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	0	0	0	1	2	2	n.s.	-2.4%	22.5%	11.1%	8.2%	-0.8%
<b>Buildings</b>	<b>86</b>	<b>49</b>	<b>56</b>	<b>72</b>	<b>89</b>	<b>109</b>	<b>122</b>	<b>-5.3%</b>	<b>1.2%</b>	<b>2.7%</b>	<b>2.1%</b>	<b>2.1%</b>	<b>1.1%</b>
Coal	5	1	5	5	4	4	3	-14.7%	18.3%	-0.6%	-0.8%	-1.1%	-1.4%
Oil	16	4	6	8	7	7	6	-12.1%	3.6%	2.1%	-0.9%	-0.6%	-1.1%
Gas	39	28	28	37	48	62	71	-3.3%	-0.1%	2.9%	2.8%	2.5%	1.4%
Electricity	4	5	6	9	13	17	21	1.8%	1.0%	4.1%	3.7%	3.0%	2.1%
Heat	21	10	10	11	11	11	12	-7.6%	0.2%	1.1%	0.1%	0.4%	0.9%
Biomass & Other	1	1	1	4	6	8	8	4.6%	-0.4%	11.5%	4.0%	4.0%	-0.3%
<b>Agriculture</b>	<b>8</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>9</b>	<b>10</b>	<b>-5.1%</b>	<b>-0.4%</b>	<b>2.3%</b>	<b>2.2%</b>	<b>1.9%</b>	<b>1.6%</b>
Coal	0	0	0	0	0	0	0	-26.7%	43.6%	-0.6%	0.0%	0.0%	0.0%
Oil	3	2	2	3	3	4	4	-1.8%	-1.8%	2.1%	1.9%	1.6%	1.2%
Gas	1	0	0	0	0	1	1	-17.0%	3.6%	3.8%	1.7%	1.4%	1.0%
Electricity	4	2	2	3	4	5	6	-5.6%	-0.4%	2.6%	2.7%	2.4%	2.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	8.3%	18.3%	0.7%	0.0%	0.0%	0.0%
<b>Transport</b>	<b>21</b>	<b>11</b>	<b>16</b>	<b>22</b>	<b>25</b>	<b>29</b>	<b>31</b>	<b>-6.4%</b>	<b>4.0%</b>	<b>3.0%</b>	<b>1.6%</b>	<b>1.5%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	0	0	-9.9%	3.8%	5.4%	0.0%	0.0%	0.0%
Oil	20	10	15	20	20	21	20	-6.2%	3.7%	2.9%	0.3%	0.2%	-0.6%
Gas	0	0	0	0	1	2	3	-7.0%	12.3%	1.2%	9.7%	4.9%	3.6%
Electricity	1	0	1	1	2	3	4	-10.3%	6.1%	3.7%	8.1%	4.3%	2.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	2	3	5	n.s.	n.s.	36.2%	19.6%	8.0%	4.1%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>28</b>	<b>22</b>	<b>36</b>	<b>50</b>	<b>70</b>	<b>87</b>	<b>94</b>	<b>-2.1%</b>	<b>4.9%</b>	<b>3.3%</b>	<b>3.3%</b>	<b>2.3%</b>	<b>0.7%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Argentina	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	33	37	41	46	49	53	55	1.2%	1.1%	1.0%	0.8%	0.7%	0.5%
GDP per capita (ppp, k\$'05)	7	10	13	15	19	23	27	3.3%	2.7%	1.4%	2.0%	1.9%	1.7%
GDP per capita (mer, k\$'05)	4	5	7	8	10	12	14	3.3%	2.7%	1.4%	2.0%	1.9%	1.7%
Share Value Added - Agriculture (%)	10	6	7	6	5	5	5	-3.8%	1.3%	-2.4%	-0.6%	-0.5%	-0.3%
Share Value Added - Industry (%)	39	33	39	37	36	35	33	-1.7%	1.7%	-0.5%	-0.3%	-0.4%	-0.4%
Share Value Added - Services (%)	52	61	54	57	59	60	62	1.6%	-1.2%	0.6%	0.3%	0.3%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	14	18	20	-4.2%	5.6%	-0.2%	0.9%	2.4%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	17	26	20	23	41	62	88	4.7%	-2.5%	1.1%	6.1%	4.3%	3.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	322	360	394	369	387	413	437	1.1%	0.9%	-0.7%	0.5%	0.7%	0.6%
Total GHG (excl. sinks)	363	408	437	398	411	435	458	1.2%	0.7%	-0.9%	0.3%	0.6%	0.5%
Total GHG (energy, industry, agriculture)	246	289	332	315	344	378	411	1.6%	1.4%	-0.5%	0.9%	1.0%	0.8%
CO <sub>2</sub>	111	154	196	178	200	228	255	3.4%	2.4%	-0.9%	1.2%	1.3%	1.1%
CH <sub>4</sub>	98	97	85	83	85	88	90	-0.2%	-1.2%	-0.3%	0.2%	0.3%	0.3%
N <sub>2</sub> O	35	38	50	53	58	62	65	0.9%	2.9%	0.6%	0.8%	0.6%	0.5%
F gases	2	0	1	1	1	1	1	-19.9%	9.2%	1.5%	2.3%	2.2%	1.9%
Total GHG from Energy and Industry	137	183	223	201	222	250	278	3.0%	2.0%	-1.1%	1.0%	1.2%	1.1%
CO <sub>2</sub> Emissions from Fuel Comb.	105	147	187	168	189	215	241	3.4%	2.4%	-1.0%	1.2%	1.3%	1.1%
Power generation/District heating	19	30	45	35	52	77	100	4.7%	4.2%	-2.4%	4.0%	3.9%	2.7%
Industry	16	29	34	37	41	47	51	6.0%	1.5%	0.8%	1.2%	1.3%	0.8%
Buildings	18	20	27	24	24	22	20	1.0%	3.0%	-0.9%	-0.2%	-0.7%	-1.2%
Agriculture	5	8	11	10	11	13	14	5.1%	3.3%	-0.7%	1.2%	1.1%	1.0%
Transport	29	41	44	43	40	37	34	3.7%	0.5%	-0.1%	-0.8%	-0.9%	-0.6%
Other	18	19	27	19	20	20	22	0.5%	3.7%	-3.7%	0.7%	0.1%	0.9%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-3.9%	31.4%	2.6%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-3.6%	31.0%	2.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	2.5%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-4.2%	31.8%	2.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	46	79	78	47	38	39	47	5.7%	-0.1%	-4.9%	-2.1%	0.4%	1.8%
Coal	0	0	0	0	0	0	1	0.2%	-12.8%	9.7%	9.4%	6.3%	2.8%
Oil	26	41	35	18	11	5	2	4.9%	-1.6%	-6.4%	-4.7%	-7.4%	-7.6%
Natural gas	15	31	33	14	9	9	13	7.6%	0.7%	-8.2%	-4.3%	-0.4%	3.7%
Biomass	2	3	5	8	10	14	17	6.4%	6.4%	4.8%	1.8%	3.1%	2.4%
Nuclear <sup>1</sup>	2	2	2	3	3	4	5	-1.6%	1.5%	3.2%	0.5%	3.3%	1.9%
Hydro	2	2	3	3	3	3	4	4.7%	1.6%	-0.3%	1.3%	0.7%	0.8%
Other renewables	0	0	0	1	2	4	6	n.s.	12.3%	n.s.	2.6%	9.1%	3.6%
Net Imports	0	-17	3	29	47	58	62						
Coal	1	1	2	3	8	18	26						
Oil	-6	-18	-3	7	12	16	18						
Natural gas	4	0	5	22	29	25	21						
Biomass	0	0	0	-2	-2	-3	-2						
Biofuels	0	0	-1	-1	-1	-1	-1						
Electricity	0	0	1	2	2	2	2						
Primary Energy Demand <sup>2</sup>	45	62	81	77	85	97	110	3.2%	2.7%	-0.5%	1.1%	1.3%	1.2%
Coal	1	1	2	3	8	18	26	-2.3%	5.8%	4.0%	11.4%	9.0%	3.6%
Oil	20	23	31	24	23	21	20	1.7%	3.0%	-2.5%	-0.5%	-0.8%	-0.7%
Natural gas	19	30	38	36	38	34	33	4.9%	2.2%	-0.5%	0.5%	-1.1%	-0.2%
Biomass	2	3	5	6	8	11	15	6.4%	6.4%	1.9%	2.1%	3.6%	2.9%
Nuclear <sup>1</sup>	2	2	2	3	3	4	5	-1.6%	1.5%	3.2%	0.5%	3.3%	1.9%
Hydro	2	2	3	3	3	3	4	4.7%	1.6%	-0.3%	1.3%	0.7%	0.8%
Other renewables	0	0	0	1	2	4	6	n.s.	12.3%	n.s.	2.6%	9.1%	3.6%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	45	62	81	77	85	97	110	3.2%	2.7%	-0.5%	1.1%	1.3%	1.2%
Energy for Power Generation	11	16	23	21	26	35	46	4.2%	3.4%	-1.0%	2.4%	3.0%	2.6%
Other Energy Transformation & Losses	7	5	12	9	10	10	11	-2.6%	8.5%	-3.2%	1.0%	0.6%	1.0%
Final consumption	31	47	56	58	63	71	78	4.3%	1.8%	0.4%	0.8%	1.1%	0.9%
Steel, Non-Met. Minerals and Chem.	1	3	3	4	4	4	3	13.4%	1.7%	2.3%	-0.7%	-0.1%	-0.7%
Other Industry	8	12	14	14	16	20	24	4.2%	0.8%	0.1%	1.8%	2.1%	1.6%
Non-Energy Use	2	4	5	6	7	8	9	9.1%	0.8%	2.7%	1.3%	1.4%	1.0%
Residential	6	9	13	12	13	13	13	3.9%	3.0%	0.0%	0.0%	0.4%	0.3%
Services	3	3	4	4	5	6	7	0.2%	4.2%	-0.5%	2.2%	2.2%	1.6%
Agriculture	2	3	4	3	4	4	5	5.3%	3.5%	-0.5%	1.2%	1.1%	1.0%
Road	9	12	14	14	15	15	15	3.3%	1.3%	0.3%	0.0%	0.3%	0.3%
Rail	0	0	0	0	0	0	0	5.2%	2.5%	-0.1%	1.9%	1.7%	1.4%
Aviation	1	0	0	0	1	1	1	-3.3%	-3.0%	2.1%	3.1%	2.6%	2.1%
Other Transport	0	0	0	0	0	1	1	24.3%	14.7%	0.6%	2.3%	1.7%	1.3%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%



Argentina	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	7	12	18	14	19	24	31	5.3%	3.9%	-2.6%	3.0%	2.6%	2.8%
Coal	0	0	1	2	7	16	22	3.8%	5.1%	9.7%	12.3%	9.3%	3.4%
Oil	2	1	4	3	2	1	1	-5.9%	15.6%	-3.8%	-2.4%	-4.1%	-3.3%
Gas	5	11	13	8	9	4	4	7.4%	1.7%	-4.3%	0.5%	-7.4%	-0.1%
Biomass & Waste	0	0	1	1	1	3	5	6.6%	13.5%	3.7%	3.2%	6.8%	5.0%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	51	89	126	127	163	221	284	5.7%	3.5%	0.1%	2.6%	3.1%	2.6%
Coal	1	2	3	8	32	82	117	11.4%	4.7%	11.6%	14.2%	9.9%	3.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	5	3	17	11	9	6	4	-5.4%	19.2%	-4.1%	-2.3%	-3.9%	-3.1%
Gas	20	49	63	45	48	23	23	9.4%	2.6%	-3.3%	0.7%	-6.9%	0.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	1	2	3	6	13	22	20.2%	12.5%	4.0%	5.5%	8.6%	5.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	7	6	7	10	11	15	18	-1.6%	1.5%	3.4%	0.6%	3.6%	2.0%
Hydro	18	29	34	33	37	40	43	4.7%	1.6%	-0.3%	1.3%	0.7%	0.8%
Wind	0	0	0	16	18	36	42	n.s.	12.3%	n.s.	1.6%	6.9%	1.5%
Solar	0	0	0	1	2	6	13	n.s.	n.s.	n.s.	15.0%	10.3%	8.2%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	32.1%	16.8%	12.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	17	23	32	43	48	68	83	2.9%	3.6%	2.8%	1.1%	3.6%	2.0%
Coal	1	1	1	1	4	12	17	-1.9%	0.0%	5.3%	14.3%	10.5%	3.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	1	2	2	2	2	3	-3.8%	4.9%	1.1%	-4.5%	3.1%	2.4%
Gas	7	11	17	18	16	15	12	4.8%	4.8%	0.8%	-1.3%	-0.9%	-2.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	1	0	1	2	3	19.6%	12.8%	-0.3%	4.8%	9.0%	6.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	1	1	1	2	2	2	3	0.0%	0.0%	5.6%	0.4%	3.4%	1.8%
Hydro	7	9	11	12	13	14	15	3.0%	2.1%	0.6%	1.3%	0.7%	0.8%
Wind	0	0	0	7	8	15	17	n.s.	13.6%	n.s.	1.6%	6.9%	1.3%
Solar	0	0	0	1	2	6	13	n.s.	n.s.	n.s.	14.4%	9.5%	8.1%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.3%	12.0%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	31	47	56	58	63	71	78	4.3%	1.8%	0.4%	0.8%	1.1%	0.9%
Coal	1	1	1	1	2	3	4	0.1%	1.0%	1.1%	6.5%	4.9%	3.7%
Oil	16	22	25	23	23	21	21	3.6%	1.1%	-0.6%	-0.3%	-0.5%	-0.4%
Gas	10	15	19	22	23	24	23	4.4%	2.6%	1.3%	0.4%	0.5%	-0.1%
Electricity	4	6	10	10	13	17	21	6.4%	4.1%	0.3%	2.3%	2.8%	2.4%
Heat	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	39.2%	7.0%
Biomass & Other	1	3	2	3	4	6	7	6.4%	-3.2%	4.1%	4.0%	3.5%	2.4%
Share of Renewables <sup>3</sup> (%)	10%	12%	9%	13%	17%	25%	30%	1.5%	-2.1%	3.3%	3.1%	3.6%	1.9%
<b>Industry (incl. non-energy use)</b>	11	19	21	23	27	31	36	6.0%	1.0%	1.0%	1.3%	1.6%	1.2%
Coal	1	1	1	1	2	3	4	0.1%	1.0%	1.1%	6.5%	4.9%	3.7%
Oil	3	7	7	7	7	6	6	9.3%	0.6%	-0.2%	-0.5%	-0.7%	-1.1%
Gas	4	7	8	10	12	14	14	4.3%	2.1%	2.5%	1.4%	1.5%	0.5%
Electricity	2	3	4	4	5	7	9	4.8%	3.3%	0.4%	1.9%	3.0%	2.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	2	1	1	1	2	3	7.0%	-8.1%	-1.1%	4.3%	3.7%	3.5%
<b>Buildings</b>	9	12	16	16	17	19	20	2.9%	3.3%	-0.1%	0.6%	0.9%	0.7%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	1	2	1	1	1	1	-3.5%	4.1%	-5.7%	-1.7%	-1.5%	-1.5%
Gas	5	7	9	9	9	8	8	2.8%	2.7%	0.2%	0.1%	-0.6%	-1.1%
Electricity	2	3	5	6	6	7	9	8.1%	4.7%	0.2%	1.0%	1.7%	1.7%
Heat	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	39.2%	7.0%
Biomass & Other	0	0	0	1	1	2	2	2.8%	-3.7%	8.5%	5.7%	3.7%	1.9%
<b>Agriculture</b>	2	3	4	3	4	4	5	5.3%	3.5%	-0.5%	1.2%	1.1%	1.0%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	2	3	3	4	4	4	5.1%	3.3%	-0.7%	1.2%	1.1%	1.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	2.5%	5.2%	1.6%	2.0%	1.9%	1.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	10.4%	2.2%	0.0%	0.0%	0.0%
<b>Transport</b>	10	13	15	15	16	16	17	3.0%	1.3%	0.4%	0.2%	0.4%	0.5%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	9	11	12	12	11	10	10	2.0%	0.4%	-0.2%	-0.4%	-0.8%	-0.6%
Gas	0	1	2	2	2	1	1	22.7%	4.7%	0.5%	-3.3%	-1.9%	-0.3%
Electricity	0	0	0	0	1	2	3	5.2%	2.5%	4.7%	28.5%	7.3%	3.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	1	1	2	2	3	n.s.	n.s.	8.1%	3.2%	3.4%	2.0%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	7	5	12	9	10	10	11	-2.6%	8.5%	-3.2%	1.0%	0.6%	1.0%

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Brazil	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	150	176	199	216	229	236	238	1.6%	1.2%	0.8%	0.6%	0.3%	0.1%
GDP per capita (ppp, k\$'05)	7	8	10	9	12	15	18	1.0%	2.4%	-0.5%	2.1%	2.4%	2.0%
GDP per capita (mer, k\$'05)	4	4	6	5	7	8	10	1.0%	2.4%	-0.3%	2.1%	2.4%	2.0%
Share Value Added - Agriculture (%)	8	6	5	6	5	5	4	-3.6%	-0.5%	0.6%	-1.0%	-0.9%	-0.6%
Share Value Added - Industry (%)	39	28	28	26	26	24	23	-3.3%	0.1%	-0.6%	-0.3%	-0.6%	-0.7%
Share Value Added - Services (%)	53	67	67	68	69	71	73	2.3%	0.0%	0.2%	0.2%	0.3%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	14	18	20	-4.2%	5.6%	-0.2%	0.9%	2.4%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	17	26	20	23	41	62	88	4.7%	-2.5%	1.1%	6.1%	4.3%	3.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	1 395	2 094	1 294	1 232	1 294	1 329	1 322	4.1%	-4.7%	-0.5%	0.5%	0.3%	-0.1%
Total GHG (excl. sinks)	1 395	2 094	1 294	1 232	1 294	1 361	1 393	4.1%	-4.7%	-0.5%	0.5%	0.5%	0.2%
Total GHG (energy, industry, agriculture)	633	830	977	1 072	1 190	1 308	1 367	2.7%	1.6%	0.9%	1.1%	0.9%	0.4%
CO <sub>2</sub>	227	348	438	486	557	642	681	4.4%	2.3%	1.0%	1.4%	1.4%	0.6%
CH <sub>4</sub>	285	338	357	383	411	429	440	1.7%	0.6%	0.7%	0.7%	0.4%	0.2%
N <sub>2</sub> O	118	142	175	195	213	225	232	1.9%	2.1%	1.1%	0.9%	0.5%	0.3%
F gases	4	2	6	7	10	12	14	-5.9%	12.0%	1.2%	2.7%	2.5%	1.7%
Total GHG from Energy and Industry	280	411	514	571	648	737	776	3.9%	2.2%	1.1%	1.3%	1.3%	0.5%
CO <sub>2</sub> Emissions from Fuel Comb.	200	308	395	435	496	572	607	4.4%	2.5%	1.0%	1.3%	1.4%	0.6%
Power generation/District heating	10	27	40	9	17	43	72	10.5%	4.0%	-14.3%	6.9%	10.0%	5.3%
Industry	59	94	111	118	151	186	204	4.7%	1.7%	0.7%	2.5%	2.1%	0.9%
Buildings	20	25	23	20	17	14	12	2.2%	-0.6%	-1.5%	-1.9%	-1.6%	-1.4%
Agriculture	10	14	19	20	21	23	24	3.5%	2.5%	0.6%	0.7%	0.7%	0.6%
Transport	80	124	171	230	247	259	240	4.5%	3.3%	3.0%	0.7%	0.5%	-0.8%
Other	20	24	31	39	44	47	53	1.7%	2.6%	2.3%	1.2%	0.8%	1.3%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.4%	1.8%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.3%	1.8%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.7%	1.7%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.5%	1.8%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	95	143	240	402	435	457	494	4.1%	5.4%	5.3%	0.8%	0.5%	0.8%
Coal	2	3	2	2	3	4	6	6.4%	-2.6%	-1.1%	3.0%	4.1%	3.2%
Oil	32	63	105	222	199	143	109	6.9%	5.3%	7.7%	-1.1%	-3.2%	-2.7%
Natural gas	3	6	12	24	32	43	63	9.3%	6.9%	7.2%	2.8%	3.1%	3.7%
Biomass	41	43	82	100	134	180	216	0.6%	6.6%	2.1%	3.0%	2.9%	1.9%
Nuclear <sup>1</sup>	1	2	4	5	6	13	16	10.5%	9.2%	1.6%	3.3%	7.2%	2.7%
Hydro	18	26	35	43	51	54	56	3.9%	2.9%	2.3%	1.5%	0.7%	0.2%
Other renewables	0	0	1	5	10	20	29	n.s.	33.4%	24.2%	7.9%	6.8%	3.8%
Net Imports	40	45	28	-126	-112	-71	-62						
Coal	9	14	16	15	19	28	37						
Oil	27	25	-1	-101	-67	-5	22						
Natural gas	1	2	11	-4	-8	-14	-28						
Biomass	0	0	0	-39	-57	-76	-80						
Biofuels	1	0	-1	0	-2	-7	-15						
Electricity	2	4	3	3	3	3	3						
Primary Energy Demand <sup>2</sup>	135	187	268	275	323	386	432	3.3%	3.7%	0.3%	1.6%	1.8%	1.1%
Coal	11	17	18	17	22	32	43	4.6%	0.7%	-0.6%	2.6%	3.9%	2.8%
Oil	59	88	104	121	132	139	131	4.0%	1.7%	1.5%	0.8%	0.5%	-0.6%
Natural gas	3	8	23	20	24	29	34	9.2%	11.4%	-1.5%	1.7%	2.1%	1.6%
Biomass	41	43	82	61	77	104	136	0.6%	6.6%	-2.8%	2.3%	3.0%	2.7%
Nuclear <sup>1</sup>	1	2	4	5	6	13	16	10.5%	9.2%	1.6%	3.3%	7.2%	2.7%
Hydro	18	26	35	43	51	54	56	3.9%	2.9%	2.3%	1.5%	0.7%	0.2%
Other renewables	0	0	1	5	10	20	29	n.s.	33.4%	24.2%	7.9%	6.8%	3.8%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	135	187	268	275	323	386	432	3.3%	3.7%	0.3%	1.6%	1.8%	1.1%
Energy for Power Generation	22	37	58	56	73	101	127	5.5%	4.6%	-0.4%	2.7%	3.3%	2.3%
Other Energy Transformation & Losses	23	28	48	45	58	76	93	1.7%	5.7%	-0.6%	2.5%	2.7%	2.1%
Final consumption	114	156	215	229	263	301	321	3.2%	3.2%	0.6%	1.4%	1.4%	0.6%
Steel, Non-Met. Minerals and Chem.	21	27	32	31	33	35	35	2.4%	1.6%	-0.3%	0.7%	0.5%	0.1%
Other Industry	21	32	51	50	64	79	90	3.9%	4.9%	-0.3%	2.5%	2.1%	1.3%
Non-Energy Use	9	14	17	15	17	19	20	3.8%	2.2%	-1.4%	1.3%	1.3%	0.5%
Residential	18	21	24	23	24	27	29	1.4%	1.4%	-0.2%	0.5%	1.0%	0.7%
Services	5	8	11	13	16	21	26	5.1%	2.7%	1.8%	2.3%	2.8%	2.2%
Agriculture	6	7	10	11	12	13	14	2.0%	3.1%	1.1%	0.7%	0.7%	0.7%
Road	29	43	65	80	90	99	97	3.8%	4.2%	2.2%	1.1%	1.0%	-0.2%
Rail	1	1	1	1	1	1	1	-2.0%	7.6%	1.0%	0.7%	0.9%	0.7%
Aviation	2	3	3	4	5	6	7	5.2%	0.2%	1.3%	2.1%	2.5%	1.5%
Other Transport	1	1	1	1	2	2	2	-1.6%	4.1%	-1.1%	2.1%	1.8%	1.2%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Brazil	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>4</b>	<b>9</b>	<b>19</b>	<b>3</b>	<b>6</b>	<b>14</b>	<b>27</b>	<b>10.4%</b>	<b>7.4%</b>	<b>-16.5%</b>	<b>6.0%</b>	<b>9.6%</b>	<b>6.4%</b>
Coal	1	3	3	1	3	9	15	8.3%	-0.2%	-9.9%	10.6%	11.6%	5.1%
Oil	1	4	4	0	0	0	0	11.7%	-0.4%	-41.4%	-20.4%	n.s.	n.s.
Gas	0	1	7	2	2	3	6	28.1%	22.8%	-12.4%	1.4%	5.0%	6.3%
Biomass & Waste	1	2	6	0	1	2	6	7.7%	14.0%	-25.6%	8.6%	11.8%	10.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>223</b>	<b>349</b>	<b>515</b>	<b>575</b>	<b>731</b>	<b>943</b>	<b>1 146</b>	<b>4.6%</b>	<b>4.0%</b>	<b>1.1%</b>	<b>2.4%</b>	<b>2.6%</b>	<b>2.0%</b>
Coal	5	11	11	5	14	46	78	8.8%	0.3%	-8.3%	11.1%	12.8%	5.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	5	15	16	0	0	0	0	11.9%	0.6%	-41.1%	-20.3%	n.s.	n.s.
Gas	0	4	36	10	12	19	36	28.7%	24.5%	-12.1%	1.5%	5.1%	6.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	4	8	31	1	3	11	30	7.4%	14.9%	-26.3%	8.5%	12.2%	11.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	2	6	15	17	24	50	66	10.5%	9.2%	1.7%	3.5%	7.5%	2.8%
Hydro	207	304	403	504	588	632	648	3.9%	2.9%	2.3%	1.5%	0.7%	0.2%
Wind	0	0	2	33	62	105	135	n.s.	n.s.	31.9%	6.5%	5.4%	2.6%
Solar	0	0	0	4	28	78	145	n.s.	n.s.	n.s.	22.4%	11.0%	6.4%
Other	0	0	0	0	0	2	8	n.s.	n.s.	n.s.	31.2%	19.5%	14.2%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>54</b>	<b>74</b>	<b>113</b>	<b>202</b>	<b>268</b>	<b>360</b>	<b>425</b>	<b>3.3%</b>	<b>4.3%</b>	<b>6.0%</b>	<b>2.9%</b>	<b>3.0%</b>	<b>1.7%</b>
Coal	1	2	2	5	10	20	28	2.7%	0.1%	10.6%	6.3%	7.5%	3.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	4	6	8	17	25	30	31	3.5%	2.9%	7.6%	3.9%	1.9%	0.4%
Gas	0	1	11	22	26	32	24	12.0%	23.2%	7.0%	1.7%	2.0%	-2.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	1	2	8	20	26	31	32	5.1%	16.0%	9.6%	3.0%	1.8%	0.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	1	2	2	2	3	7	9	11.8%	0.0%	1.8%	3.3%	7.2%	2.5%
Hydro	46	61	81	114	133	143	147	3.0%	2.8%	3.6%	1.5%	0.7%	0.2%
Wind	0	0	1	18	26	43	55	n.s.	46.8%	34.8%	3.5%	5.2%	2.4%
Solar	0	0	0	3	19	54	99	n.s.	n.s.	n.s.	22.2%	10.9%	6.4%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	30.4%	18.9%	13.7%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>114</b>	<b>156</b>	<b>215</b>	<b>229</b>	<b>263</b>	<b>301</b>	<b>321</b>	<b>3.2%</b>	<b>3.2%</b>	<b>0.6%</b>	<b>1.4%</b>	<b>1.4%</b>	<b>0.6%</b>
Coal	6	9	11	12	16	20	23	3.8%	2.4%	1.2%	2.3%	2.3%	1.7%
Oil	53	80	93	111	121	128	122	4.2%	1.6%	1.8%	0.8%	0.6%	-0.5%
Gas	2	5	13	12	16	19	21	7.2%	10.0%	-0.4%	2.7%	2.2%	0.7%
Electricity	18	28	38	42	53	68	83	4.3%	3.1%	1.0%	2.4%	2.6%	2.0%
Heat	0	0	0	2	3	4	4	n.s.	28.4%	16.0%	4.5%	4.6%	1.1%
Biomass & Other	35	35	60	49	55	62	68	0.1%	5.4%	-1.8%	1.2%	1.1%	1.0%
Share of Renewables <sup>3</sup> (%)	49%	42%	47%	44%	48%	52%	56%	-1.6%	1.1%	-0.7%	0.9%	0.8%	0.9%
<b>Industry (incl. non-energy use)</b>	<b>52</b>	<b>72</b>	<b>100</b>	<b>95</b>	<b>114</b>	<b>133</b>	<b>145</b>	<b>3.3%</b>	<b>3.3%</b>	<b>-0.5%</b>	<b>1.8%</b>	<b>1.6%</b>	<b>0.9%</b>
Coal	6	9	11	12	16	20	23	3.8%	2.4%	1.2%	2.3%	2.3%	1.7%
Oil	17	26	27	26	31	35	36	4.6%	0.2%	-0.2%	1.7%	1.3%	0.1%
Gas	2	4	10	10	13	16	16	7.0%	8.8%	-0.4%	2.8%	2.0%	0.2%
Electricity	10	13	17	17	22	28	33	2.7%	3.3%	-0.3%	2.8%	2.4%	1.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	18	20	34	30	32	34	37	1.5%	5.3%	-1.3%	0.6%	0.6%	0.9%
<b>Buildings</b>	<b>23</b>	<b>29</b>	<b>34</b>	<b>36</b>	<b>40</b>	<b>48</b>	<b>55</b>	<b>2.3%</b>	<b>1.8%</b>	<b>0.4%</b>	<b>1.2%</b>	<b>1.7%</b>	<b>1.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	6	8	7	6	4	3	3	2.3%	-0.9%	-2.0%	-2.9%	-2.3%	-1.9%
Gas	0	0	0	1	1	1	1	1.9%	7.3%	5.0%	5.1%	0.9%	0.1%
Electricity	8	14	19	22	26	33	40	5.9%	3.0%	1.8%	1.8%	2.3%	1.9%
Heat	0	0	0	2	3	4	4	n.s.	28.4%	16.0%	4.5%	4.6%	1.1%
Biomass & Other	9	7	8	6	6	6	6	-2.2%	1.1%	-3.3%	0.2%	0.1%	0.8%
<b>Agriculture</b>	<b>6</b>	<b>7</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>2.0%</b>	<b>3.1%</b>	<b>1.1%</b>	<b>0.7%</b>	<b>0.7%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	5	6	6	7	7	8	3.5%	2.5%	0.6%	0.7%	0.7%	0.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	1	1	2	2	3	3	4	6.8%	3.2%	4.7%	1.3%	1.3%	1.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	2	2	3	2	2	2	2	-2.8%	4.4%	-0.3%	0.0%	0.0%	0.0%
<b>Transport</b>	<b>33</b>	<b>47</b>	<b>70</b>	<b>86</b>	<b>97</b>	<b>108</b>	<b>107</b>	<b>3.7%</b>	<b>4.0%</b>	<b>2.0%</b>	<b>1.2%</b>	<b>1.1%</b>	<b>0.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	27	41	54	73	79	82	75	4.4%	2.7%	3.2%	0.8%	0.4%	-0.9%
Gas	0	0	2	1	1	2	3	n.s.	21.9%	-2.9%	0.1%	4.2%	4.5%
Electricity	0	0	0	0	1	3	6	0.5%	2.9%	2.1%	21.1%	11.3%	6.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	6	6	15	11	15	20	22	-0.3%	9.3%	-2.6%	3.1%	2.6%	1.2%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>23</b>	<b>28</b>	<b>48</b>	<b>45</b>	<b>58</b>	<b>76</b>	<b>93</b>	<b>1.7%</b>	<b>5.7%</b>	<b>-0.6%</b>	<b>2.5%</b>	<b>2.7%</b>	<b>2.1%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Canada	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	28	31	34	38	40	42	44	1.0%	1.1%	1.0%	0.7%	0.5%	0.4%
GDP per capita (ppp, k\$'05)	27	33	35	39	44	50	58	1.9%	0.8%	0.9%	1.3%	1.4%	1.5%
GDP per capita (mer, k\$'05)	28	33	36	40	46	52	61	1.8%	0.8%	1.0%	1.3%	1.4%	1.5%
Share Value Added - Agriculture (%)	3	2	2	2	2	2	2	-2.3%	-1.7%	-0.3%	-0.4%	-0.4%	-0.3%
Share Value Added - Industry (%)	31	33	32	30	28	24	21	0.6%	-0.4%	-0.5%	-1.0%	-1.2%	-1.6%
Share Value Added - Services (%)	66	65	66	68	71	74	77	-0.2%	0.2%	0.3%	0.4%	0.5%	0.5%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	14	18	20	-4.2%	5.6%	-0.2%	0.9%	2.4%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	17	26	20	23	41	62	88	4.7%	-2.5%	1.1%	6.1%	4.3%	3.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	522	679	780	844	813	841	886	2.7%	1.4%	0.8%	-0.4%	0.3%	0.5%
Total GHG (excl. sinks)	617	746	780	844	892	953	1 018	1.9%	0.4%	0.8%	0.6%	0.7%	0.7%
Total GHG (energy, industry, agriculture)	599	734	721	744	789	817	871	2.1%	-0.2%	0.3%	0.6%	0.3%	0.6%
CO <sub>2</sub>	458	569	563	596	625	645	688	2.2%	-0.1%	0.6%	0.5%	0.3%	0.6%
CH <sub>4</sub>	72	95	89	79	96	101	111	2.8%	-0.7%	-1.2%	2.0%	0.5%	0.9%
N <sub>2</sub> O	59	60	60	58	57	58	60	0.2%	0.1%	-0.3%	-0.2%	0.1%	0.3%
F gases	11	10	9	11	11	12	13	-0.4%	-1.2%	1.8%	0.5%	0.7%	0.3%
Total GHG from Energy and Industry	552	678	666	689	732	755	805	2.1%	-0.2%	0.3%	0.6%	0.3%	0.6%
CO <sub>2</sub> Emissions from Fuel Comb.	431	535	533	563	593	616	660	2.2%	0.0%	0.5%	0.5%	0.4%	0.7%
Power generation/District heating	96	134	109	71	104	134	176	3.3%	-2.1%	-4.1%	3.9%	2.5%	2.8%
Industry	88	99	81	95	86	82	77	1.2%	-1.9%	1.6%	-1.0%	-0.5%	-0.6%
Buildings	74	85	72	80	78	74	71	1.5%	-1.7%	1.1%	-0.3%	-0.4%	-0.5%
Agriculture	8	10	15	18	19	21	23	3.1%	3.6%	2.0%	0.8%	0.8%	0.8%
Transport	115	136	158	162	140	122	103	1.7%	1.5%	0.3%	-1.5%	-1.3%	-1.7%
Other	51	71	100	138	166	183	210	3.4%	3.5%	3.3%	1.9%	1.0%	1.4%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	5.0%	10.8%	22.0%
Coal	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	1.6%	10.8%	33.3%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	1.9%	24.0%	8.7%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	9.8%	1.0%	0.7%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	280	385	402	519	762	833	881	3.2%	0.4%	2.6%	3.9%	0.9%	0.6%
Coal	40	39	35	35	133	95	17	0.0%	-1.1%	-0.1%	14.3%	-3.3%	-15.7%
Oil	97	133	164	212	306	380	492	3.2%	2.1%	2.6%	3.7%	2.2%	2.6%
Natural gas	90	150	132	176	202	211	216	5.2%	-1.3%	2.9%	1.4%	0.4%	0.3%
Biomass	8	12	14	28	46	61	64	3.8%	2.1%	6.8%	5.1%	3.0%	0.4%
Nuclear <sup>1</sup>	19	19	24	28	28	30	27	0.0%	2.2%	1.5%	0.1%	0.5%	-0.9%
Hydro	26	31	30	34	35	36	37	1.9%	-0.2%	1.1%	0.4%	0.4%	0.3%
Other renewables	0	0	1	6	12	19	27	n.s.	42.8%	21.5%	7.1%	5.0%	3.6%
Net Imports	- 67	- 132	- 148	- 251	- 473	- 525	- 553						
Coal	- 14	- 7	- 12	- 12	- 96	- 44	54						
Oil	- 17	- 46	- 80	- 137	- 243	- 329	- 454						
Natural gas	- 36	- 76	- 54	- 86	- 111	- 122	- 127						
Biomass	0	0	0	- 12	- 18	- 23	- 18						
Biofuels	0	0	0	0	- 1	- 2	- 3						
Electricity	0	- 3	- 2	- 4	- 4	- 4	- 4						
Primary Energy Demand <sup>2</sup>	212	252	253	268	288	308	328	1.7%	0.0%	0.6%	0.7%	0.7%	0.6%
Coal	25	32	23	23	38	52	71	2.5%	-3.3%	-0.1%	5.1%	3.2%	3.2%
Oil	80	87	85	76	63	51	38	0.8%	-0.3%	-1.1%	-1.9%	-2.0%	-2.9%
Natural gas	54	74	79	89	90	88	89	3.2%	0.6%	1.3%	0.1%	-0.2%	0.1%
Biomass	8	12	14	16	28	38	45	3.7%	1.8%	1.6%	5.4%	3.3%	1.7%
Nuclear <sup>1</sup>	19	19	24	28	28	30	27	0.0%	2.2%	1.5%	0.1%	0.5%	-0.9%
Hydro	26	31	30	34	35	36	37	1.9%	-0.2%	1.1%	0.4%	0.4%	0.3%
Other renewables	0	0	1	6	12	19	27	n.s.	42.8%	21.5%	7.1%	5.0%	3.6%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	212	252	253	268	288	308	328	1.7%	0.0%	0.6%	0.7%	0.7%	0.6%
Energy for Power Generation	71	89	89	88	106	124	143	2.3%	0.0%	-0.1%	1.8%	1.6%	1.4%
Other Energy Transformation & Losses	20	20	18	19	32	41	50	-0.2%	-1.1%	0.5%	5.4%	2.5%	2.1%
Final consumption	157	185	189	208	209	214	217	1.7%	0.2%	1.0%	0.1%	0.2%	0.1%
Steel, Non-Met. Minerals and Chem.	11	12	11	12	9	8	7	0.8%	-1.0%	0.5%	-2.5%	-1.7%	-0.9%
Other Industry	37	44	33	39	40	41	40	1.7%	-2.9%	1.8%	0.3%	0.2%	-0.1%
Non-Energy Use	15	20	23	25	24	24	23	2.8%	1.7%	0.7%	-0.2%	-0.1%	-0.4%
Residential	29	31	33	36	39	41	43	0.7%	0.7%	1.0%	0.6%	0.5%	0.5%
Services	22	27	25	28	33	38	46	2.2%	-0.7%	1.0%	1.6%	1.6%	1.7%
Agriculture	3	4	6	7	7	8	9	2.6%	2.8%	2.0%	0.9%	0.9%	0.9%
Road	33	39	49	51	47	44	39	1.7%	2.2%	0.5%	-0.9%	-0.6%	-1.2%
Rail	2	2	2	2	2	2	2	-0.7%	0.2%	1.2%	0.0%	0.0%	0.0%
Aviation	3	4	4	5	5	5	5	2.4%	-0.7%	2.5%	0.2%	0.1%	0.1%
Other Transport	1	2	3	2	2	2	3	0.4%	6.6%	-3.0%	0.9%	0.4%	0.5%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Canada	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>27</b>	<b>39</b>	<b>34</b>	<b>21</b>	<b>31</b>	<b>39</b>	<b>52</b>	<b>3.9%</b>	<b>-1.3%</b>	<b>-4.9%</b>	<b>4.0%</b>	<b>2.3%</b>	<b>2.8%</b>
Coal	20	27	19	15	24	32	42	2.9%	-3.3%	-2.3%	4.8%	2.9%	2.9%
Oil	4	3	2	0	0	0	0	-1.5%	-4.3%	n.s.	n.s.	n.s.	n.s.
Gas	2	7	11	5	4	3	3	14.7%	4.4%	-7.8%	-2.1%	-3.2%	1.0%
Biomass & Waste	1	2	2	1	3	4	6	7.8%	0.7%	-7.4%	12.1%	3.2%	3.5%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>482</b>	<b>605</b>	<b>600</b>	<b>663</b>	<b>793</b>	<b>930</b>	<b>1 076</b>	<b>2.3%</b>	<b>-0.1%</b>	<b>1.0%</b>	<b>1.8%</b>	<b>1.6%</b>	<b>1.5%</b>
Coal	82	118	80	64	111	151	201	3.6%	-3.8%	-2.2%	5.7%	3.2%	2.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	19.4%
Oil	16	15	8	0	0	0	0	-1.1%	-6.1%	n.s.	n.s.	n.s.	n.s.
Gas	10	33	52	30	25	18	20	13.2%	4.4%	-5.3%	-1.6%	-3.3%	1.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	11.9%
Biomass & Waste	4	8	9	4	14	19	28	7.2%	1.4%	-7.4%	12.6%	3.5%	3.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	73	73	91	106	107	115	108	0.0%	2.2%	1.5%	0.1%	0.7%	-0.7%
Hydro	297	359	351	392	406	422	434	1.9%	-0.2%	1.1%	0.4%	0.4%	0.3%
Wind	0	0	9	59	114	179	249	n.s.	42.5%	20.6%	6.8%	4.6%	3.4%
Solar	0	0	0	8	16	25	34	n.s.	36.0%	37.6%	6.3%	4.7%	3.4%
Other	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	26.8%	16.1%	12.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>103</b>	<b>111</b>	<b>130</b>	<b>177</b>	<b>224</b>	<b>277</b>	<b>326</b>	<b>0.7%</b>	<b>1.6%</b>	<b>3.1%</b>	<b>2.4%</b>	<b>2.1%</b>	<b>1.6%</b>
Coal	19	18	14	16	24	36	44	-0.8%	-2.3%	1.1%	4.3%	4.2%	2.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	19.9%
Oil	7	8	7	11	14	14	14	0.5%	-1.4%	5.4%	1.8%	0.2%	-0.2%
Gas	4	7	13	24	29	30	31	5.9%	7.0%	6.4%	2.1%	0.1%	0.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	13.4%
Biomass & Waste	1	1	5	3	3	6	9	2.2%	15.1%	-5.1%	1.9%	6.1%	3.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	13	10	13	13	13	14	13	-2.2%	2.3%	0.6%	-0.1%	0.7%	-0.7%
Hydro	59	67	75	78	81	84	86	1.3%	1.1%	0.4%	0.3%	0.4%	0.3%
Wind	0	0	4	25	48	73	101	n.s.	39.9%	20.2%	6.6%	4.4%	3.3%
Solar	0	0	0	7	13	20	28	n.s.	44.3%	37.6%	6.3%	4.7%	3.4%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	26.1%	15.6%	12.0%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>157</b>	<b>185</b>	<b>189</b>	<b>208</b>	<b>209</b>	<b>214</b>	<b>217</b>	<b>1.7%</b>	<b>0.2%</b>	<b>1.0%</b>	<b>0.1%</b>	<b>0.2%</b>	<b>0.1%</b>
Coal	4	5	4	4	4	6	8	0.6%	-1.4%	0.1%	0.9%	2.5%	3.3%
Oil	69	80	92	94	82	72	60	1.6%	1.4%	0.2%	-1.4%	-1.4%	-1.8%
Gas	40	49	40	51	49	48	46	1.9%	-2.0%	2.4%	-0.3%	-0.2%	-0.4%
Electricity	36	41	41	44	53	63	73	1.4%	0.0%	0.7%	1.9%	1.7%	1.6%
Heat	1	1	0	1	1	2	3	2.5%	-5.9%	5.6%	5.3%	5.9%	4.4%
Biomass & Other	7	10	11	14	19	24	27	3.1%	1.6%	2.5%	2.9%	2.2%	1.3%
Share of Renewables <sup>3</sup> (%)	22%	24%	25%	28%	36%	44%	50%	0.6%	0.4%	1.2%	2.6%	2.0%	1.4%
<b>Industry (incl. non-energy use)</b>	<b>63</b>	<b>76</b>	<b>67</b>	<b>76</b>	<b>74</b>	<b>73</b>	<b>71</b>	<b>1.8%</b>	<b>-1.2%</b>	<b>1.2%</b>	<b>-0.3%</b>	<b>-0.1%</b>	<b>-0.3%</b>
Coal	4	5	4	4	4	6	8	0.7%	-1.4%	0.1%	0.9%	2.5%	3.3%
Oil	18	22	27	26	23	19	15	2.0%	1.9%	-0.1%	-1.5%	-1.8%	-2.4%
Gas	20	23	16	22	21	20	18	1.5%	-3.9%	3.4%	-0.6%	-0.3%	-1.1%
Electricity	14	17	15	16	18	20	21	1.9%	-1.5%	0.8%	1.2%	0.8%	0.5%
Heat	1	1	0	1	1	1	1	2.5%	-6.6%	4.7%	-0.2%	-0.3%	-0.2%
Biomass & Other	6	8	6	6	7	8	9	3.1%	-3.1%	1.4%	0.8%	1.1%	1.3%
<b>Buildings</b>	<b>50</b>	<b>58</b>	<b>58</b>	<b>64</b>	<b>71</b>	<b>79</b>	<b>88</b>	<b>1.4%</b>	<b>0.1%</b>	<b>1.0%</b>	<b>1.0%</b>	<b>1.0%</b>	<b>1.1%</b>
Coal	0	0	0	0	0	0	0	-3.1%	-1.1%	-8.0%	-1.0%	-1.3%	-1.5%
Oil	9	9	5	5	5	6	6	0.0%	-5.0%	-0.5%	0.6%	0.4%	0.0%
Gas	20	25	24	27	26	24	23	2.3%	-0.5%	1.5%	-0.5%	-0.7%	-0.7%
Electricity	20	23	25	26	31	37	45	1.0%	0.9%	0.6%	1.7%	1.8%	1.9%
Heat	0	0	0	0	1	2	3	4.4%	17.3%	12.2%	18.5%	9.8%	5.8%
Biomass & Other	1	2	5	6	8	10	12	2.1%	9.4%	2.0%	3.9%	2.4%	1.9%
<b>Agriculture</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>2.6%</b>	<b>2.8%</b>	<b>2.0%</b>	<b>0.9%</b>	<b>0.9%</b>	<b>0.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	3	4	5	5	6	6	3.3%	4.2%	1.8%	0.8%	0.8%	0.8%
Gas	0	1	1	1	1	1	1	1.6%	-0.3%	4.3%	0.6%	0.6%	0.6%
Electricity	1	1	1	1	1	1	1	1.1%	-0.2%	1.2%	1.3%	1.2%	1.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	20.7%	6.7%	4.2%
<b>Transport</b>	<b>40</b>	<b>47</b>	<b>57</b>	<b>61</b>	<b>57</b>	<b>54</b>	<b>49</b>	<b>1.6%</b>	<b>2.0%</b>	<b>0.6%</b>	<b>-0.7%</b>	<b>-0.5%</b>	<b>-1.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	40	47	56	58	49	41	33	1.6%	1.9%	0.3%	-1.7%	-1.6%	-2.2%
Gas	0	0	0	0	1	3	4	3.6%	-2.2%	22.9%	16.3%	5.8%	4.9%
Electricity	0	0	0	0	2	4	6	n.s.	n.s.	n.s.	26.4%	7.1%	3.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	1	2	4	6	6	n.s.	24.2%	7.4%	5.6%	3.3%	0.1%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>20</b>	<b>20</b>	<b>18</b>	<b>19</b>	<b>32</b>	<b>41</b>	<b>50</b>	<b>-0.2%</b>	<b>-1.1%</b>	<b>0.5%</b>	<b>5.4%</b>	<b>2.5%</b>	<b>2.1%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Chile	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	13	15	17	19	20	21	22	1.4%	1.2%	1.0%	0.7%	0.4%	0.2%
GDP per capita (ppp, k\$'05)	7	11	15	18	22	25	29	4.9%	2.7%	2.2%	2.0%	1.5%	1.3%
GDP per capita (mer, k\$'05)	4	7	9	11	13	15	17	4.9%	2.7%	2.1%	2.0%	1.5%	1.3%
Share Value Added - Agriculture (%)	10	6	7	6	5	5	5	-3.8%	1.3%	-2.5%	-0.5%	-0.3%	-0.2%
Share Value Added - Industry (%)	39	33	39	37	35	34	33	-1.7%	1.7%	-0.5%	-0.4%	-0.3%	-0.4%
Share Value Added - Services (%)	52	61	54	57	59	60	62	1.6%	-1.2%	0.7%	0.3%	0.2%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	14	18	20	-4.2%	5.6%	-0.2%	0.9%	2.4%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	17	26	20	23	41	62	88	4.7%	-2.5%	1.1%	6.1%	4.3%	3.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	56	71	97	110	124	130	131	2.4%	3.1%	1.3%	1.3%	0.4%	0.1%
Total GHG (excl. sinks)	56	83	112	122	142	151	159	4.0%	3.0%	0.8%	1.5%	0.6%	0.5%
Total GHG (energy, industry, agriculture)	51	83	104	122	142	151	159	5.0%	2.2%	1.6%	1.5%	0.6%	0.5%
CO <sub>2</sub>	34	60	78	90	107	113	119	5.7%	2.7%	1.5%	1.7%	0.6%	0.5%
CH <sub>4</sub>	12	17	18	22	25	27	28	3.6%	0.6%	2.2%	1.1%	0.8%	0.4%
N <sub>2</sub> O	5	7	8	10	10	11	11	3.0%	1.8%	1.6%	0.7%	0.5%	0.4%
F gases	0	0	0	0	0	0	0	-8.4%	1.9%	1.6%	1.3%	0.6%	0.2%
Total GHG from Energy and Industry	41	71	90	105	124	132	139	5.6%	2.3%	1.6%	1.7%	0.6%	0.5%
CO <sub>2</sub> Emissions from Fuel Comb.	31	55	72	83	98	103	109	5.7%	2.8%	1.4%	1.7%	0.5%	0.5%
Power generation/District heating	8	14	25	33	46	51	58	5.2%	6.4%	2.6%	3.4%	1.2%	1.3%
Industry	8	15	15	15	16	17	17	6.1%	0.3%	-0.4%	0.8%	0.7%	0.1%
Buildings	3	5	6	5	5	4	4	3.7%	1.8%	-0.4%	-0.9%	-1.0%	-1.8%
Agriculture	0	1	1	1	1	1	1	3.7%	4.5%	-0.4%	1.2%	0.9%	0.8%
Transport	9	17	18	21	22	21	19	6.7%	0.8%	1.4%	0.3%	-0.5%	-0.9%
Other	2	4	7	8	9	9	10	5.4%	5.1%	2.0%	0.9%	0.1%	0.7%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	31.4%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	31.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	8	8	9	16	21	29	37	0.8%	0.8%	5.9%	2.8%	3.3%	2.5%
Coal	2	0	0	2	3	3	4	-15.8%	0.0%	22.7%	2.5%	2.1%	1.5%
Oil	1	0	1	1	1	2	2	-9.3%	4.2%	3.2%	4.2%	3.4%	2.8%
Natural gas	1	2	2	2	5	8	11	1.2%	-0.2%	4.9%	7.0%	4.9%	3.7%
Biomass	3	4	5	7	8	10	12	4.6%	0.4%	4.6%	0.6%	2.6%	1.9%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	9.4%	11.7%
Hydro	1	2	2	2	2	3	3	7.6%	1.6%	1.8%	1.1%	1.0%	1.0%
Other renewables	0	0	0	1	2	3	4	n.s.	n.s.	40.9%	6.8%	5.6%	3.0%
Net Imports	6	17	22	22	23	20	16						
Coal	1	3	4	6	9	11	13						
Oil	5	10	14	14	13	10	9						
Natural gas	0	4	3	2	2	-2	-6						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	14	25	31	38	44	49	53	6.2%	2.0%	2.3%	1.4%	1.0%	0.8%
Coal	3	3	5	8	11	15	17	2.3%	3.5%	5.9%	3.3%	2.4%	1.7%
Oil	6	10	15	15	14	12	11	5.0%	3.6%	0.0%	-0.3%	-1.6%	-0.9%
Natural gas	1	5	4	5	6	6	5	15.9%	-1.5%	0.6%	3.0%	-0.6%	-1.6%
Biomass	3	4	5	7	8	10	12	4.6%	0.4%	4.7%	0.5%	2.6%	1.9%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	9.4%	11.7%
Hydro	1	2	2	2	2	3	3	7.6%	1.6%	1.8%	1.1%	1.0%	1.0%
Other renewables	0	0	0	1	2	3	4	n.s.	n.s.	40.9%	6.8%	5.6%	3.0%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	14	25	31	38	44	49	53	6.2%	2.0%	2.3%	1.4%	1.0%	0.8%
Energy for Power Generation	3	6	10	15	19	22	26	7.2%	4.7%	4.2%	2.5%	1.8%	1.5%
Other Energy Transformation & Losses	1	2	2	3	4	5	6	6.2%	1.6%	5.6%	1.7%	1.3%	1.8%
Final consumption	11	20	24	27	31	34	36	6.2%	1.5%	1.4%	1.3%	0.9%	0.7%
Steel, Non-Met. Minerals and Chem.	0	1	1	1	1	1	1	4.1%	-0.3%	1.1%	0.4%	0.4%	0.2%
Other Industry	3	6	8	10	12	14	16	7.1%	2.8%	2.2%	2.0%	1.6%	1.3%
Non-Energy Use	1	2	1	1	1	1	1	10.1%	-8.2%	-2.7%	0.6%	0.4%	0.1%
Residential	3	5	5	6	6	6	6	4.5%	0.9%	0.6%	0.3%	0.3%	0.2%
Services	0	1	1	2	2	2	2	2.7%	8.2%	1.2%	2.1%	1.5%	1.1%
Agriculture	0	0	0	0	0	0	0	4.2%	4.1%	-0.1%	1.2%	0.9%	0.8%
Road	3	5	6	7	8	8	9	6.8%	2.2%	1.8%	1.0%	0.4%	0.1%
Rail	0	0	0	0	0	0	0	0.2%	8.1%	1.1%	1.1%	0.7%	0.5%
Aviation	0	0	0	0	0	0	0	7.4%	4.8%	0.3%	0.4%	0.1%	-0.1%
Other Transport	0	0	0	0	1	1	1	2.0%	2.3%	0.4%	2.2%	1.0%	0.7%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Chile	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>2</b>	<b>5</b>	<b>8</b>	<b>11</b>	<b>14</b>	<b>16</b>	<b>18</b>	<b>7.1%</b>	<b>5.6%</b>	<b>3.9%</b>	<b>2.3%</b>	<b>1.3%</b>	<b>1.3%</b>
Coal	2	2	4	6	9	11	13	2.4%	6.5%	4.8%	3.5%	2.3%	1.5%
Oil	0	0	2	1	1	0	1	-0.4%	14.3%	-8.0%	3.2%	-9.2%	9.6%
Gas	0	2	2	2	3	2	2	38.7%	0.6%	2.8%	2.8%	-2.4%	-3.6%
Biomass & Waste	0	0	0	2	1	2	3	13.5%	1.0%	19.0%	-4.1%	5.5%	2.3%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>18</b>	<b>40</b>	<b>60</b>	<b>88</b>	<b>117</b>	<b>147</b>	<b>176</b>	<b>8.5%</b>	<b>4.2%</b>	<b>3.9%</b>	<b>2.8%</b>	<b>2.3%</b>	<b>1.8%</b>
Coal	7	8	17	29	43	56	67	2.6%	7.1%	5.7%	4.0%	2.7%	1.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	2	8	3	4	2	4	-0.4%	17.4%	-9.1%	3.1%	-9.3%	9.8%
Gas	0	10	11	12	16	13	9	49.4%	0.2%	1.2%	2.8%	-2.2%	-3.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	1	2	7	5	10	14	13.4%	9.1%	12.2%	-3.9%	7.4%	3.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	9	19	22	26	29	32	35	7.6%	1.6%	1.8%	1.1%	1.0%	1.0%
Wind	0	0	0	9	15	25	30	n.s.	n.s.	36.7%	5.3%	5.5%	2.0%
Solar	0	0	0	2	5	9	15	n.s.	n.s.	n.s.	9.5%	5.9%	5.0%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	26.7%	17.4%	13.0%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>5</b>	<b>10</b>	<b>16</b>	<b>28</b>	<b>36</b>	<b>46</b>	<b>52</b>	<b>8.0%</b>	<b>4.9%</b>	<b>5.3%</b>	<b>2.6%</b>	<b>2.6%</b>	<b>1.3%</b>
Coal	1	2	2	5	7	10	11	6.5%	0.9%	6.6%	4.0%	3.6%	0.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	3	4	5	5	5	-0.9%	13.9%	3.8%	1.6%	-0.3%	-0.8%
Gas	0	3	4	4	5	4	2	43.0%	4.8%	0.2%	0.7%	-1.9%	-7.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	1	1	1	1	2	4.3%	12.3%	3.8%	-7.4%	7.4%	3.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	2	4	5	7	8	9	10	5.8%	2.8%	3.0%	1.1%	1.0%	1.0%
Wind	0	0	0	4	6	10	12	n.s.	n.s.	36.1%	5.1%	5.3%	1.8%
Solar	0	0	0	2	4	7	11	n.s.	n.s.	n.s.	9.5%	5.5%	4.7%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.8%	12.5%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>11</b>	<b>20</b>	<b>24</b>	<b>27</b>	<b>31</b>	<b>34</b>	<b>36</b>	<b>6.2%</b>	<b>1.5%</b>	<b>1.4%</b>	<b>1.3%</b>	<b>0.9%</b>	<b>0.7%</b>
Coal	1	1	0	1	1	2	2	1.0%	-5.6%	3.9%	5.8%	4.3%	2.7%
Oil	5	9	12	13	12	11	9	5.3%	2.8%	0.8%	-0.6%	-1.1%	-1.4%
Gas	1	3	2	2	3	3	3	13.4%	-3.3%	-2.4%	3.5%	1.0%	-0.4%
Electricity	1	3	5	7	9	11	13	9.0%	4.1%	3.6%	2.9%	2.3%	1.8%
Heat	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	11.5%	5.6%	4.0%
Biomass & Other	3	4	4	5	6	7	8	4.1%	0.4%	1.7%	1.5%	1.5%	1.4%
Share of Renewables <sup>3</sup> (%)	33%	31%	27%	32%	35%	43%	49%	-0.7%	-1.4%	1.8%	1.0%	2.0%	1.5%
<b>Industry (incl. non-energy use)</b>	<b>4</b>	<b>9</b>	<b>10</b>	<b>12</b>	<b>14</b>	<b>16</b>	<b>18</b>	<b>7.5%</b>	<b>0.5%</b>	<b>1.7%</b>	<b>1.8%</b>	<b>1.4%</b>	<b>1.1%</b>
Coal	1	1	0	1	1	2	2	1.7%	-5.5%	3.9%	5.8%	4.3%	2.7%
Oil	2	2	3	3	3	3	2	3.4%	4.6%	0.5%	-1.3%	-1.8%	-2.5%
Gas	1	3	2	1	1	1	1	14.9%	-4.8%	-5.2%	2.2%	0.8%	-0.7%
Electricity	1	2	3	5	6	8	9	9.7%	3.4%	4.4%	2.8%	2.1%	1.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-0.2%	-0.3%	-0.2%
Biomass & Other	1	1	1	2	2	2	3	5.3%	-0.3%	4.0%	2.3%	1.9%	1.9%
<b>Buildings</b>	<b>4</b>	<b>5</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>8</b>	<b>9</b>	<b>4.3%</b>	<b>2.0%</b>	<b>0.7%</b>	<b>0.7%</b>	<b>0.6%</b>	<b>0.4%</b>
Coal	0	0	0	0	0	0	0	-15.5%	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	1	1	1	1	1	3.6%	1.1%	-1.3%	-2.6%	-1.9%	-2.3%
Gas	0	0	1	1	1	1	1	5.4%	4.5%	2.5%	2.3%	0.3%	-1.3%
Electricity	0	1	2	2	2	3	3	7.8%	5.6%	1.9%	1.5%	1.3%	1.2%
Heat	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	11.7%	5.7%	4.0%
Biomass & Other	2	3	3	3	3	4	4	3.7%	0.6%	0.4%	0.5%	0.4%	0.3%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4.2%</b>	<b>4.1%</b>	<b>-0.1%</b>	<b>1.2%</b>	<b>0.9%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	0	0	-13.4%	-8.8%	-5.0%	0.0%	0.0%	0.0%
Oil	0	0	0	0	0	0	0	8.3%	5.0%	-0.3%	1.2%	0.9%	0.8%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	5.7%	-6.8%	7.2%	2.0%	1.7%	1.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>3</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>10</b>	<b>6.4%</b>	<b>2.3%</b>	<b>1.6%</b>	<b>1.1%</b>	<b>0.4%</b>	<b>0.1%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	6	7	8	8	7	7	6.4%	2.3%	1.3%	-0.1%	-0.8%	-1.1%
Gas	0	0	0	0	0	1	1	3.5%	8.5%	21.4%	14.1%	2.9%	1.3%
Electricity	0	0	0	0	0	1	1	0.4%	7.0%	3.8%	23.8%	7.4%	3.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	12.6%	7.0%	5.0%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>6.2%</b>	<b>1.6%</b>	<b>5.6%</b>	<b>1.7%</b>	<b>1.3%</b>	<b>1.8%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Mexico	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	86	103	119	135	148	158	164	1.8%	1.4%	1.3%	0.9%	0.6%	0.4%
GDP per capita (ppp, k\$'05)	10	12	12	15	18	23	30	1.7%	0.3%	1.6%	2.3%	2.5%	2.4%
GDP per capita (mer, k\$'05)	7	8	8	9	12	15	19	1.7%	0.3%	1.5%	2.3%	2.5%	2.4%
Share Value Added - Agriculture (%)	8	3	3	3	3	3	3	-7.8%	-0.1%	-0.3%	-0.9%	-0.8%	-0.6%
Share Value Added - Industry (%)	28	36	35	35	34	33	31	2.3%	-0.3%	0.1%	-0.3%	-0.5%	-0.6%
Share Value Added - Services (%)	64	61	62	61	63	65	67	-0.5%	0.2%	-0.1%	0.2%	0.3%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	14	18	20	-4.2%	5.6%	-0.2%	0.9%	2.4%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	17	26	20	23	41	62	88	4.7%	-2.5%	1.1%	6.1%	4.3%	3.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	505	602	737	803	908	988	1 052	1.8%	2.1%	0.9%	1.2%	0.8%	0.6%
Total GHG (excl. sinks)	518	626	750	803	908	1 008	1 108	1.9%	1.8%	0.7%	1.2%	1.0%	1.0%
Total GHG (energy, industry, agriculture)	466	573	713	766	879	969	1 070	2.1%	2.2%	0.7%	1.4%	1.0%	1.0%
CO <sub>2</sub>	305	394	471	506	601	681	772	2.6%	1.8%	0.7%	1.7%	1.3%	1.3%
CH <sub>4</sub>	103	118	166	174	179	176	176	1.3%	3.4%	0.5%	0.3%	-0.2%	0.0%
N <sub>2</sub> O	56	58	69	75	84	92	97	0.3%	1.7%	0.8%	1.2%	0.9%	0.5%
F gases	1	3	8	11	15	20	25	7.9%	10.1%	2.8%	3.2%	3.0%	2.4%
Total GHG from Energy and Industry	373	486	621	660	757	832	924	2.7%	2.5%	0.6%	1.4%	1.0%	1.1%
CO <sub>2</sub> Emissions from Fuel Comb.	283	359	431	462	552	625	709	2.4%	1.9%	0.7%	1.8%	1.2%	1.3%
Power generation/District heating	63	112	122	147	232	296	359	5.9%	0.9%	1.8%	4.7%	2.5%	1.9%
Industry	64	62	55	67	70	80	96	-0.4%	-1.2%	2.1%	0.3%	1.4%	1.8%
Buildings	24	31	28	27	25	22	20	2.5%	-1.1%	-0.5%	-0.8%	-1.2%	-0.8%
Agriculture	5	7	9	10	11	13	14	2.6%	2.6%	1.2%	1.3%	1.3%	1.1%
Transport	83	104	148	142	135	134	131	2.3%	3.6%	-0.4%	-0.5%	-0.1%	-0.2%
Other	43	43	68	69	79	80	89	0.0%	4.8%	0.1%	1.4%	0.1%	1.1%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	3.9%	0.8%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	3.9%	0.8%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	3.8%	0.7%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	4.0%	0.8%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	186	227	219	233	211	205	223	2.0%	-0.3%	0.6%	-1.0%	-0.3%	0.9%
Coal	3	6	7	8	14	25	34	6.6%	1.2%	1.5%	6.3%	5.8%	3.2%
Oil	145	170	146	130	105	66	46	1.6%	-1.5%	-1.2%	-2.1%	-4.5%	-3.6%
Natural gas	23	32	48	68	46	41	46	3.4%	4.2%	3.6%	-3.7%	-1.2%	1.1%
Biomass	9	9	8	9	14	21	26	0.4%	-0.7%	0.3%	4.6%	4.6%	2.2%
Nuclear <sup>1</sup>	1	2	2	3	6	13	21	10.8%	-3.3%	5.2%	8.8%	7.9%	5.4%
Hydro	2	3	3	3	4	4	4	3.5%	1.1%	0.8%	0.2%	0.0%	0.0%
Other renewables	4	5	6	13	22	35	46	1.5%	1.5%	8.4%	5.2%	4.7%	2.8%
Net Imports	- 67	- 81	- 42	- 30	37	85	113						
Coal	2	2	4	8	19	37	52						
Oil	- 69	- 80	- 51	- 39	- 17	16	36						
Natural gas	1	- 3	6	1	33	28	19						
Biomass	0	0	0	1	2	3	3						
Biofuels	0	0	0	0	0	1	2						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	119	146	177	203	247	290	336	2.1%	1.9%	1.4%	2.0%	1.6%	1.5%
Coal	5	8	10	15	33	62	86	5.5%	2.5%	4.0%	8.0%	6.5%	3.3%
Oil	76	90	95	90	88	83	82	1.8%	0.5%	-0.5%	-0.3%	-0.6%	0.0%
Natural gas	23	29	53	69	79	69	65	2.3%	6.3%	2.6%	1.4%	-1.4%	-0.5%
Biomass	9	9	8	10	15	24	29	0.4%	-0.7%	1.6%	4.4%	4.7%	2.0%
Nuclear <sup>1</sup>	1	2	2	3	6	13	21	10.8%	-3.3%	5.2%	8.8%	7.9%	5.4%
Hydro	2	3	3	3	4	4	4	3.5%	1.1%	0.8%	0.2%	0.0%	0.0%
Other renewables	4	5	6	13	22	35	46	1.5%	1.5%	8.4%	5.2%	4.7%	2.8%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	119	146	177	203	247	290	336	2.1%	1.9%	1.4%	2.0%	1.6%	1.5%
Energy for Power Generation	28	48	56	74	111	145	182	5.5%	1.5%	2.9%	4.2%	2.7%	2.3%
Other Energy Transformation & Losses	15	14	26	32	39	43	50	-1.1%	6.4%	2.3%	1.9%	1.1%	1.6%
Final consumption	84	99	114	124	140	163	186	1.6%	1.4%	0.9%	1.2%	1.6%	1.3%
Steel, Non-Met. Minerals and Chem.	15	14	12	12	12	13	15	-0.6%	-1.6%	0.1%	-0.4%	1.1%	1.2%
Other Industry	12	14	16	26	32	41	49	2.1%	1.0%	5.1%	2.3%	2.3%	1.8%
Non-Energy Use	9	10	8	7	8	9	11	0.8%	-1.9%	-2.1%	1.4%	2.0%	1.3%
Residential	16	18	18	18	19	21	22	1.4%	-0.1%	-0.2%	0.8%	0.9%	0.6%
Services	2	3	5	6	9	12	16	4.7%	3.1%	3.4%	3.5%	2.9%	2.4%
Agriculture	2	3	4	4	5	5	6	2.4%	2.2%	1.5%	1.5%	1.5%	1.4%
Road	27	34	50	49	53	60	66	2.3%	4.0%	-0.2%	0.7%	1.2%	1.0%
Rail	1	1	1	1	1	1	1	-1.0%	0.5%	1.3%	1.5%	1.7%	1.7%
Aviation	0	0	0	0	0	0	0	n.s.	1.1%	-7.9%	3.2%	3.1%	2.5%
Other Transport	0	1	1	1	1	1	1	11.4%	-5.6%	0.6%	2.2%	1.7%	1.3%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Mexico	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>21</b>	<b>38</b>	<b>45</b>	<b>55</b>	<b>80</b>	<b>94</b>	<b>111</b>	<b>6.1%</b>	<b>1.8%</b>	<b>2.0%</b>	<b>3.8%</b>	<b>1.6%</b>	<b>1.7%</b>
Coal	2	5	8	12	28	52	69	10.0%	5.3%	4.1%	9.0%	6.4%	2.8%
Oil	15	23	10	6	9	6	8	4.3%	-7.9%	-4.4%	3.7%	-4.2%	2.5%
Gas	3	9	25	34	39	30	26	9.7%	11.3%	3.0%	1.4%	-2.7%	-1.3%
Biomass & Waste	0	1	1	2	2	4	6	n.s.	4.1%	4.2%	1.2%	7.5%	5.1%
Other	0	1	1	1	1	2	2	1.4%	1.2%	3.4%	5.2%	3.0%	1.5%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>116</b>	<b>204</b>	<b>271</b>	<b>372</b>	<b>552</b>	<b>750</b>	<b>965</b>	<b>5.8%</b>	<b>2.9%</b>	<b>3.2%</b>	<b>4.0%</b>	<b>3.1%</b>	<b>2.5%</b>
Coal	8	19	33	50	132	262	356	9.6%	5.3%	4.3%	10.3%	7.1%	3.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	62	94	44	27	39	26	34	4.3%	-7.4%	-4.7%	3.7%	-3.9%	2.8%
Gas	14	41	141	174	201	158	140	11.1%	13.0%	2.1%	1.5%	-2.4%	-1.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	2	3	3	6	18	33	n.s.	4.9%	0.0%	9.2%	10.8%	6.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	3	8	6	10	24	51	88	10.8%	-3.3%	5.2%	9.2%	8.1%	5.5%
Hydro	23	33	37	40	41	41	41	3.5%	1.1%	0.8%	0.2%	0.0%	0.0%
Wind	0	0	1	46	60	109	134	34.2%	50.8%	44.7%	2.6%	6.2%	2.1%
Solar	0	0	0	13	34	63	111	19.9%	15.8%	n.s.	9.7%	6.5%	5.7%
Other	5	6	7	9	16	22	28	1.4%	1.2%	3.4%	5.3%	3.3%	2.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>27</b>	<b>42</b>	<b>62</b>	<b>98</b>	<b>131</b>	<b>197</b>	<b>246</b>	<b>4.6%</b>	<b>3.9%</b>	<b>4.6%</b>	<b>3.0%</b>	<b>4.1%</b>	<b>2.3%</b>
Coal	1	5	6	7	18	39	53	15.6%	1.7%	1.7%	9.8%	7.9%	3.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	12	16	14	10	7	6	8	2.9%	-1.4%	-3.4%	-2.5%	-2.8%	3.5%
Gas	5	9	28	36	39	43	33	7.1%	11.7%	2.5%	1.0%	1.0%	-2.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	1	3	5	n.s.	1.2%	-0.9%	7.8%	11.2%	6.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	1	1	1	1	3	7	11	7.7%	0.0%	-0.3%	9.0%	7.9%	5.3%
Hydro	8	10	12	14	14	14	14	2.1%	1.8%	2.0%	0.3%	0.0%	0.0%
Wind	0	0	1	20	26	46	55	n.s.	n.s.	44.4%	2.4%	5.9%	1.8%
Solar	0	0	0	8	20	37	63	19.9%	16.4%	n.s.	9.7%	6.3%	5.6%
Other	1	1	1	1	2	3	4	2.0%	1.2%	2.6%	6.0%	2.2%	2.6%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>84</b>	<b>99</b>	<b>114</b>	<b>124</b>	<b>140</b>	<b>163</b>	<b>186</b>	<b>1.6%</b>	<b>1.4%</b>	<b>0.9%</b>	<b>1.2%</b>	<b>1.6%</b>	<b>1.3%</b>
Coal	2	2	2	4	5	7	12	0.6%	-0.1%	6.3%	2.3%	4.9%	4.7%
Oil	51	62	74	70	65	64	62	1.9%	1.8%	-0.5%	-0.7%	-0.2%	-0.3%
Gas	14	13	13	17	19	21	22	-0.9%	-0.2%	2.7%	1.5%	0.8%	0.5%
Electricity	9	14	18	26	38	52	67	4.9%	2.5%	3.7%	4.0%	3.1%	2.6%
Heat	0	0	0	0	1	3	4	9.6%	10.4%	5.4%	16.6%	10.8%	5.7%
Biomass & Other	9	8	7	8	12	17	20	-0.4%	-1.2%	0.5%	4.3%	4.0%	1.4%
Share of Renewables <sup>3</sup> (%)	14%	12%	10%	14%	20%	28%	33%	-1.3%	-2.0%	3.2%	3.6%	3.6%	1.6%
<b>Industry (incl. non-energy use)</b>	<b>36</b>	<b>38</b>	<b>36</b>	<b>45</b>	<b>52</b>	<b>63</b>	<b>74</b>	<b>0.7%</b>	<b>-0.6%</b>	<b>2.2%</b>	<b>1.5%</b>	<b>2.0%</b>	<b>1.6%</b>
Coal	2	2	2	4	5	7	12	0.6%	-0.1%	6.3%	2.3%	4.9%	4.7%
Oil	14	14	11	11	11	11	11	0.1%	-2.2%	-0.2%	0.1%	0.2%	-0.1%
Gas	13	12	12	14	14	14	14	-0.9%	-0.4%	1.7%	-0.2%	0.2%	0.2%
Electricity	5	9	10	15	20	26	33	6.4%	1.5%	4.0%	3.1%	2.8%	2.3%
Heat	0	0	0	0	0	0	0	n.s.	10.4%	4.9%	-0.2%	-0.3%	-0.2%
Biomass & Other	2	1	1	2	3	4	4	-3.4%	-2.9%	4.2%	5.4%	5.0%	-0.4%
<b>Buildings</b>	<b>18</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>28</b>	<b>33</b>	<b>37</b>	<b>1.8%</b>	<b>0.5%</b>	<b>0.7%</b>	<b>1.6%</b>	<b>1.6%</b>	<b>1.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	7	9	8	7	6	5	4	2.8%	-1.5%	-1.5%	-2.0%	-2.0%	-1.5%
Gas	1	1	1	2	3	3	3	-1.6%	3.4%	7.4%	3.7%	0.6%	0.4%
Electricity	3	5	7	10	13	17	22	3.2%	4.5%	3.1%	3.1%	2.7%	2.4%
Heat	0	0	0	0	1	3	4	9.6%	10.4%	5.4%	17.0%	10.9%	5.7%
Biomass & Other	7	7	6	5	6	6	4	0.3%	-0.9%	-1.6%	0.7%	0.0%	-3.0%
<b>Agriculture</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>2.4%</b>	<b>2.2%</b>	<b>1.5%</b>	<b>1.5%</b>	<b>1.5%</b>	<b>1.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	2	3	3	4	4	4	2.6%	2.6%	1.2%	1.3%	1.3%	1.1%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	1	1	1	1	1	1	2	1.7%	0.9%	2.7%	2.1%	2.1%	1.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>29</b>	<b>36</b>	<b>52</b>	<b>51</b>	<b>55</b>	<b>62</b>	<b>69</b>	<b>2.4%</b>	<b>3.7%</b>	<b>-0.2%</b>	<b>0.7%</b>	<b>1.2%</b>	<b>1.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	28	36	52	49	45	44	42	2.4%	3.7%	-0.5%	-0.9%	-0.3%	-0.4%
Gas	0	0	0	1	3	4	4	n.s.	7.8%	50.0%	14.7%	3.5%	1.7%
Electricity	0	0	0	1	4	7	11	3.2%	0.8%	17.6%	22.9%	6.2%	3.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	3	7	11	n.s.	n.s.	n.s.	15.7%	8.1%	4.8%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>15</b>	<b>14</b>	<b>26</b>	<b>32</b>	<b>39</b>	<b>43</b>	<b>50</b>	<b>-1.1%</b>	<b>6.4%</b>	<b>2.3%</b>	<b>1.9%</b>	<b>1.1%</b>	<b>1.6%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



United States	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	253	283	310	334	356	374	389	1.1%	0.9%	0.7%	0.6%	0.5%	0.4%
GDP per capita (ppp, k\$'05)	33	41	44	51	58	65	73	2.3%	0.7%	1.5%	1.3%	1.2%	1.1%
GDP per capita (mer, k\$'05)	33	41	44	51	58	65	73	2.3%	0.7%	1.5%	1.3%	1.2%	1.1%
Share Value Added - Agriculture (%)	2	1	1	1	1	1	1	-5.3%	0.0%	-0.2%	-0.6%	-0.5%	-0.4%
Share Value Added - Industry (%)	27	22	19	18	17	16	15	-1.7%	-1.7%	-0.4%	-0.7%	-0.7%	-0.8%
Share Value Added - Services (%)	71	76	80	81	82	83	84	0.7%	0.4%	0.1%	0.2%	0.2%	0.1%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	14	18	20	-4.2%	5.6%	-0.2%	0.9%	2.4%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	17	26	20	23	41	62	88	4.7%	-2.5%	1.1%	6.1%	4.3%	3.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	5 339	6 274	5 798	5 791	5 535	5 800	5 970	1.6%	-0.8%	0.0%	-0.5%	0.5%	0.3%
Total GHG (excl. sinks)	6 162	6 958	6 756	6 633	6 155	6 245	6 554	1.2%	-0.3%	-0.2%	-0.7%	0.1%	0.5%
Total GHG (energy, industry, agriculture)	6 162	6 958	6 756	6 633	6 155	6 245	6 554	1.2%	-0.3%	-0.2%	-0.7%	0.1%	0.5%
CO <sub>2</sub>	5 044	5 849	5 622	5 437	4 931	4 961	5 215	1.5%	-0.4%	-0.3%	-1.0%	0.1%	0.5%
CH <sub>4</sub>	633	588	581	596	585	607	630	-0.7%	-0.1%	0.3%	-0.2%	0.4%	0.4%
N <sub>2</sub> O	395	384	404	420	431	443	450	-0.3%	0.5%	0.4%	0.3%	0.3%	0.2%
F gases	90	136	150	180	208	234	258	4.2%	1.0%	1.8%	1.5%	1.2%	1.0%
Total GHG from Energy and Industry	5 688	6 483	6 222	6 072	5 567	5 632	5 923	1.3%	-0.4%	-0.2%	-0.9%	0.1%	0.5%
CO <sub>2</sub> Emissions from Fuel Comb.	4 915	5 715	5 497	5 300	4 802	4 840	5 100	1.5%	-0.4%	-0.4%	-1.0%	0.1%	0.5%
Power generation/District heating	1 866	2 372	2 332	1 985	2 018	2 308	2 718	2.4%	-0.2%	-1.6%	0.2%	1.4%	1.6%
Industry	670	638	525	552	504	484	468	-0.5%	-1.9%	0.5%	-0.9%	-0.4%	-0.3%
Buildings	544	602	545	579	529	481	421	1.0%	-1.0%	0.6%	-0.9%	-0.9%	-1.3%
Agriculture	46	45	53	60	63	67	70	-0.2%	1.8%	1.2%	0.6%	0.5%	0.5%
Transport	1 424	1 713	1 677	1 676	1 271	1 096	1 007	1.9%	-0.2%	0.0%	-2.7%	-1.5%	-0.8%
Other	366	346	364	449	418	405	416	-0.6%	0.5%	2.1%	-0.7%	-0.3%	0.3%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-0.7%	0.1%	0.0%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-0.7%	0.1%	0.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-0.9%	0.0%	-0.1%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-0.5%	0.1%	0.0%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	1 671	1 730	1 813	2 079	2 215	2 665	3 212	0.4%	0.5%	1.4%	0.6%	1.9%	1.9%
Coal	529	575	557	483	643	1 138	1 708	0.8%	-0.3%	-1.4%	2.9%	5.9%	4.1%
Oil	440	381	373	518	475	408	360	-1.4%	-0.2%	3.4%	-0.9%	-1.5%	-1.2%
Natural gas	419	448	500	667	564	516	465	0.7%	1.1%	2.9%	-1.7%	-0.9%	-1.0%
Biomass	82	76	112	98	140	159	201	-0.8%	3.9%	-1.4%	3.6%	1.3%	2.4%
Nuclear <sup>1</sup>	162	211	222	212	229	220	204	2.7%	0.5%	-0.4%	0.8%	-0.4%	-0.7%
Hydro	25	24	25	25	25	25	25	-0.3%	0.2%	0.1%	0.2%	0.1%	0.0%
Other renewables	14	15	25	75	138	198	248	0.3%	5.4%	11.8%	6.4%	3.7%	2.3%
Net Imports	292	559	441	259	109	-276	-738						
Coal	-62	-34	-49	-110	-225	-588	-981						
Oil	332	490	433	252	137	120	108						
Natural gas	21	100	56	84	98	44	-17						
Biomass	0	0	0	26	88	140	149						
Biofuels	0	0	-1	3	7	4	0						
Electricity	0	3	2	4	4	4	4						
Primary Energy Demand <sup>2</sup>	1 962	2 290	2 254	2 338	2 324	2 389	2 474	1.6%	-0.2%	0.4%	-0.1%	0.3%	0.4%
Coal	466	542	508	373	418	550	727	1.5%	-0.6%	-3.0%	1.1%	2.8%	2.8%
Oil	772	871	805	771	612	528	468	1.2%	-0.8%	-0.4%	-2.3%	-1.5%	-1.2%
Natural gas	441	548	556	752	662	560	448	2.2%	0.2%	3.1%	-1.3%	-1.7%	-2.2%
Biomass	82	76	112	124	228	299	350	-0.8%	3.9%	1.0%	6.3%	2.8%	1.6%
Nuclear <sup>1</sup>	162	211	222	212	229	220	204	2.7%	0.5%	-0.4%	0.8%	-0.4%	-0.7%
Hydro	25	24	25	25	25	25	25	-0.3%	0.2%	0.1%	0.2%	0.1%	0.0%
Other renewables	14	15	25	75	138	198	248	0.3%	5.4%	11.8%	6.4%	3.7%	2.3%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	1 962	2 290	2 254	2 338	2 324	2 389	2 474	1.6%	-0.2%	0.4%	-0.1%	0.3%	0.4%
Energy for Power Generation	754	931	957	952	1 040	1 159	1 290	2.1%	0.3%	-0.1%	0.9%	1.1%	1.1%
Other Energy Transformation & Losses	137	132	166	223	263	275	275	-0.3%	2.3%	3.0%	1.7%	0.4%	0.0%
Final consumption	1 300	1 538	1 489	1 545	1 481	1 488	1 515	1.7%	-0.3%	0.4%	-0.4%	0.1%	0.2%
Steel, Non-Met. Minerals and Chem.	127	152	97	94	80	72	68	1.8%	-4.4%	-0.3%	-1.6%	-1.1%	-0.5%
Other Industry	181	185	169	198	198	197	195	0.2%	-0.9%	1.6%	0.0%	0.0%	-0.1%
Non-Energy Use	119	153	135	120	122	125	124	2.5%	-1.2%	-1.2%	0.2%	0.2%	0.0%
Residential	224	265	268	282	284	291	297	1.7%	0.1%	0.5%	0.1%	0.3%	0.2%
Services	157	193	217	249	276	308	340	2.1%	1.2%	1.4%	1.0%	1.1%	1.0%
Agriculture	14	14	18	20	21	22	24	-0.2%	2.2%	1.4%	0.5%	0.5%	0.5%
Road	397	493	522	501	412	383	374	2.2%	0.6%	-0.4%	-1.9%	-0.7%	-0.2%
Rail	11	10	9	13	14	15	16	-0.5%	-1.3%	3.9%	0.6%	0.5%	0.5%
Aviation	64	68	49	58	63	64	64	0.7%	-3.2%	1.6%	0.9%	0.2%	0.0%
Other Transport	6	4	4	9	11	12	13	-4.3%	0.5%	8.1%	1.5%	0.9%	0.7%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

United States	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>554</b>	<b>681</b>	<b>686</b>	<b>640</b>	<b>648</b>	<b>716</b>	<b>812</b>	<b>2.1%</b>	<b>0.1%</b>	<b>-0.7%</b>	<b>0.1%</b>	<b>1.0%</b>	<b>1.3%</b>
Coal	392	492	469	328	358	467	607	2.3%	-0.5%	-3.5%	0.9%	2.7%	2.7%
Oil	27	30	11	11	11	8	8	0.8%	-9.6%	0.3%	-0.3%	-2.9%	-0.1%
Gas	93	137	185	276	239	181	119	3.9%	3.1%	4.1%	-1.5%	-2.7%	-4.1%
Biomass & Waste	40	21	20	21	35	54	73	-6.0%	-0.5%	0.5%	5.0%	4.4%	3.1%
Other	1	1	2	4	5	6	6	-0.9%	1.9%	9.3%	3.6%	1.9%	-0.1%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>3 211</b>	<b>4 053</b>	<b>4 372</b>	<b>4 650</b>	<b>5 246</b>	<b>5 918</b>	<b>6 634</b>	<b>2.4%</b>	<b>0.8%</b>	<b>0.6%</b>	<b>1.2%</b>	<b>1.2%</b>	<b>1.2%</b>
Coal	1 700	2 129	1 994	1 389	1 501	1 968	2 583	2.3%	-0.7%	-3.5%	0.8%	2.7%	2.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	131	118	48	46	45	34	35	-1.0%	-8.6%	-0.4%	-0.2%	-2.7%	0.1%
Gas	382	634	1 018	1 584	1 415	1 087	689	5.2%	4.8%	4.5%	-1.1%	-2.6%	-4.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	79	72	75	79	147	241	347	-0.9%	0.5%	0.5%	6.4%	5.0%	3.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	612	798	839	803	873	861	815	2.7%	0.5%	-0.4%	0.8%	-0.1%	-0.5%
Hydro	289	280	286	289	294	296	296	-0.3%	0.2%	0.1%	0.2%	0.1%	0.0%
Wind	3	6	88	349	769	1 070	1 274	6.3%	31.5%	14.8%	8.2%	3.4%	1.8%
Solar	1	1	6	66	139	284	514	0.6%	24.1%	26.9%	7.7%	7.4%	6.1%
Other	16	15	18	43	61	76	82	-0.9%	1.9%	9.3%	3.6%	2.2%	0.8%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>778</b>	<b>890</b>	<b>1 041</b>	<b>1 100</b>	<b>1 361</b>	<b>1 601</b>	<b>1 750</b>	<b>1.4%</b>	<b>1.6%</b>	<b>0.5%</b>	<b>2.2%</b>	<b>1.6%</b>	<b>0.9%</b>
Coal	271	321	319	220	227	304	389	1.7%	-0.1%	-3.6%	0.3%	2.9%	2.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	82	130	56	27	23	20	18	4.7%	-8.1%	-6.8%	-1.7%	-1.5%	-1.3%
Gas	214	221	407	442	457	398	236	0.3%	6.3%	0.8%	0.3%	-1.4%	-5.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	11	15	12	11	21	35	49	3.2%	-2.6%	-0.6%	6.3%	5.3%	3.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	102	98	101	99	107	106	100	-0.4%	0.3%	-0.3%	0.8%	-0.1%	-0.5%
Hydro	92	99	101	102	104	104	105	0.7%	0.2%	0.1%	0.1%	0.1%	0.0%
Wind	2	2	39	151	327	448	525	4.5%	32.3%	14.4%	8.1%	3.2%	1.6%
Solar	1	1	4	42	87	177	317	1.3%	17.0%	25.6%	7.6%	7.3%	6.0%
Other	3	3	2	6	8	9	12	0.5%	-1.5%	8.9%	3.2%	1.8%	2.6%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>1 300</b>	<b>1 538</b>	<b>1 489</b>	<b>1 545</b>	<b>1 481</b>	<b>1 488</b>	<b>1 515</b>	<b>1.7%</b>	<b>-0.3%</b>	<b>0.4%</b>	<b>-0.4%</b>	<b>0.1%</b>	<b>0.2%</b>
Coal	58	39	31	26	32	42	57	-3.8%	-2.4%	-1.4%	1.9%	2.8%	3.1%
Oil	683	793	761	718	573	500	449	1.5%	-0.4%	-0.6%	-2.2%	-1.4%	-1.1%
Gas	288	345	295	355	318	290	258	1.8%	-1.6%	1.9%	-1.1%	-0.9%	-1.2%
Electricity	226	301	326	349	394	445	500	2.9%	0.8%	0.7%	1.2%	1.2%	1.2%
Heat	2	7	8	8	14	25	37	11.3%	1.3%	0.3%	5.4%	5.6%	4.1%
Biomass & Other	43	52	69	88	150	187	215	2.1%	2.8%	2.4%	5.5%	2.3%	1.4%
Share of Renewables <sup>3</sup> (%)	6%	6%	8%	11%	22%	30%	36%	-0.4%	2.8%	3.3%	7.2%	3.3%	1.9%
<b>Industry (incl. non-energy use)</b>	<b>427</b>	<b>490</b>	<b>402</b>	<b>412</b>	<b>400</b>	<b>393</b>	<b>388</b>	<b>1.4%</b>	<b>-2.0%</b>	<b>0.3%</b>	<b>-0.3%</b>	<b>-0.2%</b>	<b>-0.1%</b>
Coal	53	37	29	26	31	42	56	-3.6%	-2.3%	-1.3%	2.0%	2.9%	3.1%
Oil	147	160	150	121	112	99	84	0.8%	-0.6%	-2.2%	-0.7%	-1.2%	-1.7%
Gas	124	155	111	145	124	110	95	2.3%	-3.3%	2.8%	-1.6%	-1.1%	-1.4%
Electricity	75	98	74	79	83	83	82	2.8%	-2.7%	0.6%	0.4%	0.0%	-0.1%
Heat	0	4	5	5	5	5	5	n.s.	2.2%	-0.7%	-0.2%	-0.3%	-0.2%
Biomass & Other	29	36	32	37	45	55	66	2.2%	-1.1%	1.3%	2.1%	1.9%	1.9%
<b>Buildings</b>	<b>381</b>	<b>458</b>	<b>485</b>	<b>531</b>	<b>559</b>	<b>598</b>	<b>637</b>	<b>1.8%</b>	<b>0.6%</b>	<b>0.9%</b>	<b>0.5%</b>	<b>0.7%</b>	<b>0.6%</b>
Coal	5	2	2	1	1	1	1	-7.0%	-3.8%	-5.5%	-0.8%	-1.1%	-1.4%
Oil	45	48	36	32	39	42	41	0.5%	-2.8%	-1.0%	2.0%	0.8%	-0.4%
Gas	164	189	182	203	172	147	124	1.5%	-0.4%	1.1%	-1.7%	-1.5%	-1.7%
Electricity	152	202	251	266	286	321	361	2.9%	2.2%	0.6%	0.7%	1.1%	1.2%
Heat	2	3	3	3	9	20	33	1.7%	-0.2%	1.9%	10.4%	7.8%	5.0%
Biomass & Other	14	13	12	25	52	67	78	-0.3%	-0.7%	7.5%	7.4%	2.7%	1.5%
<b>Agriculture</b>	<b>14</b>	<b>14</b>	<b>18</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>24</b>	<b>-0.2%</b>	<b>2.2%</b>	<b>1.4%</b>	<b>0.5%</b>	<b>0.5%</b>	<b>0.5%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	14	14	16	18	19	20	21	-0.2%	1.1%	1.3%	0.6%	0.5%	0.5%
Gas	0	0	1	1	2	2	2	n.s.	n.s.	-0.5%	0.6%	0.5%	0.5%
Electricity	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	1	1	1	n.s.	n.s.	9.7%	0.0%	0.0%	0.0%
<b>Transport</b>	<b>477</b>	<b>576</b>	<b>584</b>	<b>581</b>	<b>500</b>	<b>474</b>	<b>466</b>	<b>1.9%</b>	<b>0.1%</b>	<b>-0.1%</b>	<b>-1.5%</b>	<b>-0.5%</b>	<b>-0.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	477	572	559	547	402	338	304	1.8%	-0.2%	-0.2%	-3.0%	-1.7%	-1.1%
Gas	0	0	1	6	22	31	37	n.s.	10.2%	23.8%	14.3%	3.5%	1.8%
Electricity	0	0	1	3	25	41	57	0.7%	3.6%	19.8%	22.3%	5.2%	3.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	3	24	25	52	64	69	n.s.	22.5%	0.3%	7.6%	2.2%	0.8%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>137</b>	<b>132</b>	<b>166</b>	<b>223</b>	<b>263</b>	<b>275</b>	<b>275</b>	<b>-0.3%</b>	<b>2.3%</b>	<b>3.0%</b>	<b>1.7%</b>	<b>0.4%</b>	<b>0.0%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Rest Central America	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	63	74	84	93	102	109	113	1.6%	1.3%	1.1%	0.9%	0.6%	0.4%
GDP per capita (ppp, k\$'05)	3	4	5	6	8	10	13	3.2%	2.7%	2.4%	2.8%	2.9%	2.8%
GDP per capita (mer, k\$'05)	3	3	4	5	6	8	11	1.7%	1.7%	1.9%	2.8%	2.9%	2.8%
Share Value Added - Agriculture (%)	8	5	6	5	4	3	3	-3.9%	0.3%	-1.6%	-2.0%	-1.6%	-1.2%
Share Value Added - Industry (%)	26	30	31	33	32	31	30	1.4%	0.6%	0.4%	-0.2%	-0.2%	-0.3%
Share Value Added - Services (%)	66	65	63	63	64	65	67	-0.2%	-0.3%	0.0%	0.2%	0.2%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	14	18	20	-4.2%	5.6%	-0.2%	0.9%	2.4%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	17	26	20	23	41	62	88	4.7%	-2.5%	1.1%	6.1%	4.3%	3.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	287	304	341	408	445	492	516	0.6%	1.2%	1.8%	0.9%	1.0%	0.5%
Total GHG (excl. sinks)	300	339	368	408	445	492	526	1.2%	0.8%	1.0%	0.9%	1.0%	0.7%
Total GHG (energy, industry, agriculture)	173	213	272	326	390	459	511	2.1%	2.5%	1.8%	1.8%	1.6%	1.1%
CO <sub>2</sub>	100	137	182	224	273	327	367	3.3%	2.9%	2.1%	2.0%	1.8%	1.2%
CH <sub>4</sub>	48	51	64	72	83	92	98	0.6%	2.3%	1.1%	1.4%	1.1%	0.6%
N <sub>2</sub> O	25	24	24	28	32	36	39	-0.7%	0.2%	1.4%	1.4%	1.2%	0.9%
F gases	0	0	1	2	3	4	6	n.s.	16.9%	3.5%	4.0%	3.8%	3.3%
Total GHG from Energy and Industry	122	164	222	270	327	389	435	3.0%	3.1%	2.0%	1.9%	1.8%	1.1%
CO <sub>2</sub> Emissions from Fuel Comb.	90	122	157	193	234	281	315	3.1%	2.6%	2.1%	1.9%	1.8%	1.2%
Power generation/District heating	23	37	52	53	64	85	101	4.7%	3.5%	0.3%	1.9%	2.9%	1.7%
Industry	26	31	41	62	81	97	108	2.0%	2.7%	4.3%	2.7%	1.8%	1.1%
Buildings	8	9	9	8	8	10	10	0.8%	-0.2%	-0.6%	0.5%	1.7%	0.3%
Agriculture	2	1	1	1	1	1	1	-1.6%	-4.4%	-0.7%	1.2%	1.3%	1.2%
Transport	20	32	40	48	52	55	59	4.7%	2.5%	1.6%	0.9%	0.7%	0.6%
Other	11	12	15	21	27	32	36	1.1%	1.8%	3.8%	2.4%	1.7%	1.0%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	27.6%	2.4%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	27.0%	2.4%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	28.0%	2.3%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	28.0%	2.5%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	33	43	70	62	58	67	80	2.7%	5.1%	-1.2%	-0.8%	1.6%	1.8%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	9	11	11	10	14	17	18	2.4%	0.3%	-0.9%	3.2%	1.9%	0.8%
Natural gas	4	13	38	17	2	3	3	11.6%	11.1%	-7.9%	-19.3%	3.6%	2.1%
Biomass	18	16	16	25	23	26	30	-1.5%	0.5%	4.4%	-0.7%	1.0%	1.5%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.4%	14.8%
Hydro	1	1	2	2	2	2	2	2.8%	3.4%	0.7%	0.8%	0.1%	0.2%
Other renewables	1	2	3	8	16	20	26	9.2%	6.1%	10.7%	6.9%	2.0%	3.0%
Net Imports	18	20	9	40	72	87	101						
Coal	0	0	2	3	10	22	32						
Oil	17	23	25	27	22	19	18						
Natural gas	0	-4	-18	17	44	50	52						
Biomass	0	0	0	-7	-4	-4	-3						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	51	62	79	103	130	154	181	2.0%	2.4%	2.6%	2.3%	1.8%	1.6%
Coal	0	0	2	3	10	22	32	5.2%	15.5%	7.5%	11.4%	8.3%	4.1%
Oil	26	34	36	37	36	35	37	2.8%	0.6%	0.2%	-0.3%	-0.2%	0.3%
Natural gas	5	9	20	34	46	53	56	6.6%	8.2%	5.5%	3.1%	1.5%	0.5%
Biomass	18	16	16	18	19	22	27	-1.5%	0.5%	1.1%	0.7%	1.3%	2.0%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.4%	14.8%
Hydro	1	1	2	2	2	2	2	2.8%	3.4%	0.7%	0.8%	0.1%	0.2%
Other renewables	1	2	3	8	16	20	26	9.2%	6.1%	10.7%	6.9%	2.0%	3.0%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	51	62	79	103	130	154	181	2.0%	2.4%	2.6%	2.3%	1.8%	1.6%
Energy for Power Generation	11	16	24	32	43	51	63	4.3%	4.0%	2.8%	3.1%	1.6%	2.2%
Other Energy Transformation & Losses	6	6	6	9	12	17	21	-0.5%	-0.5%	4.6%	3.2%	3.1%	2.1%
Final consumption	38	45	56	72	89	108	127	1.8%	2.2%	2.5%	2.1%	2.0%	1.6%
Steel, Non-Met. Minerals and Chem.	0	1	1	5	9	10	9	6.4%	4.9%	16.7%	4.8%	1.0%	-0.7%
Other Industry	14	12	11	15	18	23	29	-0.9%	-1.0%	2.7%	2.0%	2.5%	2.2%
Non-Energy Use	3	6	11	15	20	26	32	8.1%	6.6%	3.0%	2.9%	2.7%	2.2%
Residential	11	12	16	16	17	19	20	1.4%	2.5%	0.4%	0.4%	0.8%	0.6%
Services	2	2	3	4	5	7	9	1.8%	4.1%	1.8%	3.0%	3.4%	2.8%
Agriculture	1	1	0	1	1	1	1	-1.3%	-1.6%	2.5%	1.5%	1.6%	1.5%
Road	7	11	13	15	19	22	26	3.8%	1.5%	1.9%	1.9%	1.9%	1.6%
Rail	0	0	0	0	0	0	0	-8.6%	10.0%	3.0%	2.1%	1.9%	1.6%
Aviation	0	0	0	0	0	1	1	4.7%	9.2%	1.2%	3.5%	3.4%	2.9%
Other Transport	1	0	0	0	1	1	1	-6.3%	1.5%	-0.6%	3.1%	2.5%	2.2%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest Central America	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>9</b>	<b>13</b>	<b>19</b>	<b>21</b>	<b>25</b>	<b>29</b>	<b>34</b>	<b>4.0%</b>	<b>3.8%</b>	<b>1.0%</b>	<b>1.4%</b>	<b>1.6%</b>	<b>1.7%</b>
Coal	0	0	1	2	6	14	19	33.6%	14.9%	10.8%	11.4%	8.3%	3.0%
Oil	6	10	13	10	8	5	4	4.4%	2.5%	-1.9%	-2.3%	-5.0%	-2.7%
Gas	1	2	4	5	5	6	6	5.6%	6.8%	3.0%	1.1%	0.9%	0.5%
Biomass & Waste	1	1	2	3	3	2	4	-1.9%	5.7%	5.1%	0.1%	-2.9%	4.2%
Other	0	0	0	1	1	1	1	9.1%	5.5%	9.4%	6.0%	0.1%	1.7%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>43</b>	<b>68</b>	<b>94</b>	<b>118</b>	<b>160</b>	<b>229</b>	<b>315</b>	<b>4.8%</b>	<b>3.3%</b>	<b>2.2%</b>	<b>3.1%</b>	<b>3.6%</b>	<b>3.2%</b>
Coal	0	1	3	9	31	73	100	33.5%	14.7%	12.0%	12.6%	8.9%	3.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	24	40	47	46	36	21	17	5.4%	1.7%	-0.4%	-2.4%	-5.0%	-2.6%
Gas	4	7	14	20	23	27	32	6.6%	7.4%	3.7%	1.3%	1.8%	1.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	2	2	3	4	4	6	16	-0.1%	4.7%	2.3%	0.1%	4.3%	10.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	13	17	23	25	27	27	28	2.8%	3.4%	0.7%	0.8%	0.1%	0.2%
Wind	0	0	1	4	14	32	57	n.s.	11.9%	22.3%	12.9%	8.5%	5.8%
Solar	0	0	0	2	11	27	48	n.s.	-3.4%	n.s.	18.7%	9.5%	5.7%
Other	1	2	3	8	15	15	19	9.1%	5.5%	9.4%	6.1%	0.4%	2.3%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>13</b>	<b>19</b>	<b>25</b>	<b>32</b>	<b>43</b>	<b>65</b>	<b>92</b>	<b>3.6%</b>	<b>2.9%</b>	<b>2.5%</b>	<b>3.3%</b>	<b>4.2%</b>	<b>3.5%</b>
Coal	0	0	0	1	4	10	15	5.6%	1.1%	10.2%	12.8%	9.1%	4.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	8	11	15	16	14	11	8	3.6%	2.6%	0.9%	-1.4%	-2.0%	-3.7%
Gas	1	2	3	3	4	5	7	4.3%	3.6%	1.7%	0.7%	2.4%	3.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	1	1	1	1	1	2	6.1%	5.1%	0.8%	-2.2%	2.1%	10.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	3	4	5	6	6	6	6	2.3%	2.9%	1.3%	0.8%	0.1%	0.2%
Wind	0	0	0	2	6	13	23	n.s.	14.9%	21.8%	12.6%	8.3%	5.7%
Solar	0	0	0	1	7	17	28	n.s.	-3.4%	n.s.	18.6%	9.3%	5.5%
Other	0	0	1	1	2	2	3	9.3%	2.4%	8.9%	5.1%	1.0%	1.9%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>38</b>	<b>45</b>	<b>56</b>	<b>72</b>	<b>89</b>	<b>108</b>	<b>127</b>	<b>1.8%</b>	<b>2.2%</b>	<b>2.5%</b>	<b>2.1%</b>	<b>2.0%</b>	<b>1.6%</b>
Coal	0	0	1	1	3	6	11	-1.0%	12.3%	6.9%	10.5%	7.6%	5.8%
Oil	17	21	22	25	26	28	31	2.2%	0.8%	0.9%	0.5%	1.0%	0.7%
Gas	3	6	12	22	31	37	39	8.1%	7.0%	6.1%	3.5%	1.6%	0.5%
Electricity	3	5	7	8	12	17	23	4.6%	3.7%	2.2%	3.2%	3.7%	3.2%
Heat	0	0	0	1	2	2	3	n.s.	n.s.	n.s.	6.0%	2.2%	2.5%
Biomass & Other	15	14	14	14	15	18	21	-1.2%	0.4%	0.2%	0.5%	1.8%	1.7%
Share of Renewables <sup>3</sup> (%)	45%	36%	35%	31%	32%	36%	42%	-2.1%	-0.5%	-1.1%	0.4%	1.2%	1.6%
<b>Industry (incl. non-energy use)</b>	<b>17</b>	<b>19</b>	<b>23</b>	<b>35</b>	<b>46</b>	<b>59</b>	<b>70</b>	<b>1.3%</b>	<b>2.1%</b>	<b>4.1%</b>	<b>2.9%</b>	<b>2.3%</b>	<b>1.8%</b>
Coal	0	0	1	1	3	6	11	-1.0%	12.3%	6.9%	10.5%	7.6%	5.8%
Oil	7	7	6	7	8	10	12	0.5%	-1.0%	1.1%	1.5%	2.5%	1.8%
Gas	3	6	12	21	28	32	33	8.0%	7.2%	5.7%	2.9%	1.2%	0.2%
Electricity	1	2	2	3	5	6	9	4.5%	2.7%	3.8%	3.4%	3.6%	3.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	6	4	2	2	2	3	5	-3.7%	-6.2%	1.1%	0.2%	3.7%	3.4%
<b>Buildings</b>	<b>12</b>	<b>14</b>	<b>19</b>	<b>20</b>	<b>22</b>	<b>25</b>	<b>29</b>	<b>1.5%</b>	<b>2.7%</b>	<b>0.6%</b>	<b>0.9%</b>	<b>1.4%</b>	<b>1.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	3	3	2	1	1	1	0.4%	-0.1%	-2.8%	-3.7%	-2.0%	-2.5%
Gas	0	0	0	1	2	3	3	11.9%	-2.4%	18.4%	8.6%	4.5%	1.5%
Electricity	2	3	4	5	6	8	10	4.8%	4.1%	1.1%	1.7%	2.8%	2.7%
Heat	0	0	0	1	2	2	3	n.s.	n.s.	n.s.	6.0%	2.2%	2.5%
Biomass & Other	8	9	12	11	11	12	12	0.8%	3.0%	-0.2%	-0.1%	0.3%	0.2%
<b>Agriculture</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>-1.3%</b>	<b>-1.6%</b>	<b>2.5%</b>	<b>1.5%</b>	<b>1.6%</b>	<b>1.5%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	0	0	0	0	0	0	-1.6%	-4.4%	-0.7%	1.2%	1.3%	1.2%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	-1.4%	10.5%	6.3%	2.0%	2.1%	2.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	3.1%	-2.7%	6.0%	0.0%	0.0%	0.0%
<b>Transport</b>	<b>8</b>	<b>11</b>	<b>13</b>	<b>16</b>	<b>20</b>	<b>24</b>	<b>28</b>	<b>3.2%</b>	<b>1.7%</b>	<b>1.8%</b>	<b>1.9%</b>	<b>1.9%</b>	<b>1.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	7	11	13	15	16	17	17	4.3%	2.2%	1.5%	0.5%	0.3%	0.2%
Gas	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	17.6%	5.4%	3.7%
Electricity	0	0	0	0	1	2	4	-0.7%	10.0%	8.2%	34.6%	9.0%	4.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	1	0	1	1	3	5	-4.9%	-12.0%	8.6%	9.9%	7.7%	4.7%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>9</b>	<b>12</b>	<b>17</b>	<b>21</b>	<b>-0.5%</b>	<b>-0.5%</b>	<b>4.6%</b>	<b>3.2%</b>	<b>3.1%</b>	<b>2.1%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Rest South America	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	102	122	140	158	173	184	192	1.8%	1.4%	1.2%	0.9%	0.6%	0.4%
GDP per capita (ppp, k\$'05)	6	7	9	11	16	22	30	0.9%	2.6%	2.8%	3.3%	3.4%	3.2%
GDP per capita (mer, k\$'05)	3	3	4	5	7	10	14	0.8%	2.5%	2.8%	3.3%	3.4%	3.2%
Share Value Added - Agriculture (%)	10	6	7	5	5	4	4	-3.8%	1.3%	-3.1%	-1.2%	-0.9%	-0.6%
Share Value Added - Industry (%)	39	33	39	37	36	34	31	-1.7%	1.7%	-0.4%	-0.4%	-0.6%	-0.8%
Share Value Added - Services (%)	52	61	54	57	60	62	65	1.6%	-1.2%	0.7%	0.4%	0.4%	0.4%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	14	18	20	-4.2%	5.6%	-0.2%	0.9%	2.4%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	17	26	20	23	41	62	88	4.7%	-2.5%	1.1%	6.1%	4.3%	3.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	888	933	1 148	1 152	1 266	1 328	1 276	0.5%	2.1%	0.0%	0.9%	0.5%	-0.4%
Total GHG (excl. sinks)	907	1 004	1 208	1 152	1 266	1 328	1 287	1.0%	1.9%	-0.5%	0.9%	0.5%	-0.3%
Total GHG (energy, industry, agriculture)	431	523	687	786	986	1 131	1 159	2.0%	2.8%	1.4%	2.3%	1.4%	0.3%
CO <sub>2</sub>	222	284	404	491	659	784	799	2.5%	3.6%	2.0%	3.0%	1.7%	0.2%
CH <sub>4</sub>	152	182	210	216	240	252	258	1.8%	1.4%	0.3%	1.0%	0.5%	0.3%
N <sub>2</sub> O	53	55	70	74	80	86	90	0.4%	2.3%	0.6%	0.8%	0.7%	0.5%
F gases	4	2	3	4	6	9	12	-8.2%	8.2%	2.9%	3.7%	3.5%	3.0%
Total GHG from Energy and Industry	282	357	489	582	769	903	923	2.4%	3.2%	1.8%	2.8%	1.6%	0.2%
CO <sub>2</sub> Emissions from Fuel Comb.	204	257	374	453	602	717	736	2.3%	3.8%	1.9%	2.9%	1.8%	0.3%
Power generation/District heating	32	32	65	53	88	138	171	0.0%	7.4%	-1.9%	5.1%	4.7%	2.1%
Industry	49	63	93	121	178	199	167	2.7%	3.9%	2.6%	3.9%	1.1%	-1.7%
Buildings	17	20	22	25	26	26	24	1.8%	1.2%	1.1%	0.4%	0.2%	-1.0%
Agriculture	2	5	6	8	10	11	13	7.3%	2.9%	3.0%	1.6%	1.6%	1.5%
Transport	65	80	119	179	217	238	235	2.1%	4.1%	4.2%	2.0%	0.9%	-0.1%
Other	40	57	69	67	84	104	126	3.6%	1.9%	-0.3%	2.3%	2.2%	1.9%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	9.7%	1.2%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	9.6%	1.2%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	9.7%	1.1%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	9.9%	1.2%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	219	304	346	422	639	638	681	3.3%	1.3%	2.0%	4.2%	0.0%	0.6%
Coal	16	33	52	81	211	105	26	7.4%	4.8%	4.4%	10.1%	-6.8%	-13.0%
Oil	155	213	211	213	252	304	359	3.2%	-0.1%	0.1%	1.7%	1.9%	1.7%
Natural gas	25	31	50	67	87	99	108	2.3%	4.9%	2.9%	2.7%	1.3%	0.9%
Biomass	13	12	14	38	57	85	124	-1.4%	2.1%	10.4%	4.2%	4.0%	3.9%
Nuclear <sup>1</sup>	0	0	0	1	4	7	10	n.s.	n.s.	n.s.	11.1%	6.3%	3.2%
Hydro	10	16	18	21	24	26	29	4.6%	1.5%	1.6%	1.1%	0.9%	1.0%
Other renewables	0	0	0	1	5	12	25	n.s.	-10.4%	50.7%	15.9%	10.3%	7.1%
Net Imports	- 124	- 186	- 189	- 227	- 378	- 311	- 298						
Coal	- 12	- 29	- 48	- 67	- 172	- 45	36						
Oil	- 109	- 157	- 130	- 115	- 138	- 182	- 239						
Natural gas	- 1	4	- 8	- 24	- 42	- 52	- 55						
Biomass	0	0	0	- 17	- 20	- 24	- 25						
Biofuels	0	0	0	0	- 1	- 4	- 11						
Electricity	- 2	- 4	- 4	- 4	- 4	- 4	- 4						
Primary Energy Demand <sup>2</sup>	95	118	157	195	261	328	383	2.2%	2.9%	2.2%	3.0%	2.3%	1.6%
Coal	4	4	4	13	39	60	62	-1.3%	2.0%	11.4%	11.4%	4.4%	0.4%
Oil	46	56	82	98	113	122	120	2.0%	3.8%	1.9%	1.5%	0.7%	-0.2%
Natural gas	24	35	43	43	44	47	53	3.9%	1.9%	0.0%	0.4%	0.6%	1.1%
Biomass	13	12	14	21	37	61	99	-1.4%	2.1%	4.2%	5.7%	5.0%	5.0%
Nuclear <sup>1</sup>	0	0	0	1	4	7	10	n.s.	n.s.	n.s.	11.1%	6.3%	3.2%
Hydro	10	16	18	21	24	26	29	4.6%	1.5%	1.6%	1.1%	0.9%	1.0%
Other renewables	0	0	0	1	5	12	25	n.s.	-10.4%	50.7%	15.9%	10.3%	7.1%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	95	118	157	195	261	328	383	2.2%	2.9%	2.2%	3.0%	2.3%	1.6%
Energy for Power Generation	22	27	43	45	65	94	125	2.3%	4.6%	0.5%	3.8%	3.7%	2.8%
Other Energy Transformation & Losses	13	18	17	20	31	51	82	3.4%	-0.7%	1.8%	4.6%	5.0%	4.9%
Final consumption	69	85	115	153	201	239	260	2.1%	3.1%	2.9%	2.7%	1.7%	0.8%
Steel, Non-Met. Minerals and Chem.	10	14	19	22	37	38	25	3.0%	3.5%	1.5%	5.3%	0.2%	-4.2%
Other Industry	13	16	25	35	44	57	70	1.7%	4.8%	3.3%	2.3%	2.7%	2.1%
Non-Energy Use	2	5	3	5	5	6	7	10.0%	-3.6%	3.5%	0.9%	1.5%	0.8%
Residential	16	16	19	19	21	24	26	0.2%	1.5%	0.2%	0.9%	1.2%	0.9%
Services	3	4	6	8	12	17	23	3.5%	3.9%	3.2%	3.8%	3.5%	2.9%
Agriculture	2	2	3	4	5	5	6	2.4%	2.4%	2.3%	1.4%	1.5%	1.4%
Road	22	27	39	59	75	90	101	2.2%	3.7%	4.3%	2.5%	1.8%	1.2%
Rail	0	0	0	0	0	0	0	-2.6%	1.3%	3.2%	1.6%	1.7%	1.5%
Aviation	0	0	0	0	0	1	1	-0.8%	1.1%	4.4%	4.2%	3.4%	1.0%
Other Transport	1	0	0	1	1	2	2	-5.5%	2.7%	6.9%	3.7%	3.0%	2.6%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest South America	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>12</b>	<b>12</b>	<b>25</b>	<b>21</b>	<b>33</b>	<b>48</b>	<b>61</b>	<b>0.0%</b>	<b>7.7%</b>	<b>-1.5%</b>	<b>4.4%</b>	<b>3.9%</b>	<b>2.3%</b>
Coal	1	1	1	6	17	31	37	-4.2%	7.9%	15.8%	10.9%	6.1%	1.7%
Oil	3	4	9	3	1	0	1	1.9%	7.7%	-9.0%	-8.3%	-12.2%	6.4%
Gas	7	7	13	8	6	5	9	-0.6%	7.1%	-5.5%	-2.4%	-1.1%	5.2%
Biomass & Waste	0	0	1	4	8	12	14	1.7%	18.4%	13.1%	6.9%	3.4%	2.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>154</b>	<b>226</b>	<b>308</b>	<b>363</b>	<b>498</b>	<b>700</b>	<b>941</b>	<b>3.9%</b>	<b>3.1%</b>	<b>1.7%</b>	<b>3.2%</b>	<b>3.5%</b>	<b>3.0%</b>
Coal	4	3	5	29	86	162	198	-3.7%	6.9%	19.3%	11.6%	6.5%	2.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	13	15	32	15	6	2	3	2.1%	7.7%	-7.4%	-8.2%	-12.1%	6.6%
Gas	21	26	54	39	34	31	52	1.9%	7.8%	-3.3%	-1.5%	-0.7%	5.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	1	1	4	17	35	52	67	3.6%	19.1%	14.6%	7.6%	4.1%	2.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	6	16	30	42	n.s.	n.s.	n.s.	11.2%	6.4%	3.3%
Hydro	116	182	212	248	276	303	335	4.6%	1.5%	1.6%	1.1%	0.9%	1.0%
Wind	0	0	0	7	28	69	123	n.s.	n.s.	48.1%	14.9%	9.5%	6.0%
Solar	0	0	0	3	16	50	117	n.s.	n.s.	n.s.	18.6%	11.7%	8.9%
Other	0	0	0	0	0	1	5	n.s.	n.s.	n.s.	28.4%	19.0%	14.8%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>43</b>	<b>55</b>	<b>65</b>	<b>95</b>	<b>127</b>	<b>198</b>	<b>301</b>	<b>2.5%</b>	<b>1.8%</b>	<b>3.8%</b>	<b>3.0%</b>	<b>4.5%</b>	<b>4.3%</b>
Coal	1	1	1	4	13	28	40	4.7%	-0.2%	17.3%	11.7%	8.3%	3.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	6	8	9	18	20	23	31	3.2%	0.3%	7.2%	1.1%	1.6%	3.1%
Gas	8	10	15	20	15	17	23	1.8%	4.8%	2.6%	-2.7%	1.3%	3.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	1	3	6	12	17	1.9%	14.0%	17.3%	7.5%	6.5%	3.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	1	3	5	6	n.s.	n.s.	n.s.	11.0%	6.2%	3.1%
Hydro	28	36	40	44	49	54	60	2.4%	1.1%	1.1%	1.1%	0.9%	1.0%
Wind	0	0	0	3	12	28	50	n.s.	n.s.	47.3%	14.7%	9.3%	5.9%
Solar	0	0	0	2	11	31	73	n.s.	n.s.	n.s.	18.3%	11.5%	8.9%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	27.7%	18.5%	14.3%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>69</b>	<b>85</b>	<b>115</b>	<b>153</b>	<b>201</b>	<b>239</b>	<b>260</b>	<b>2.1%</b>	<b>3.1%</b>	<b>2.9%</b>	<b>2.7%</b>	<b>1.7%</b>	<b>0.8%</b>
Coal	2	3	2	6	19	23	16	2.6%	-2.2%	9.7%	12.1%	2.2%	-3.6%
Oil	35	46	60	86	99	107	104	2.6%	2.8%	3.7%	1.4%	0.7%	-0.2%
Gas	9	13	23	23	27	29	29	3.2%	5.7%	0.2%	1.6%	0.7%	-0.1%
Electricity	8	12	17	22	32	46	64	3.4%	4.0%	2.4%	3.7%	3.8%	3.3%
Heat	0	0	0	0	1	2	4	n.s.	-17.4%	39.0%	15.0%	10.0%	6.1%
Biomass & Other	13	11	13	16	23	32	43	-1.5%	1.2%	2.1%	4.0%	3.1%	3.1%
Share of Renewables <sup>3</sup> (%)	33%	32%	26%	25%	29%	35%	47%	-0.3%	-1.9%	-0.5%	1.3%	2.2%	2.9%
<b>Industry (incl. non-energy use)</b>	<b>25</b>	<b>34</b>	<b>48</b>	<b>62</b>	<b>86</b>	<b>101</b>	<b>101</b>	<b>3.1%</b>	<b>3.4%</b>	<b>2.6%</b>	<b>3.4%</b>	<b>1.6%</b>	<b>0.0%</b>
Coal	2	3	2	6	19	23	16	3.0%	-2.2%	9.8%	12.2%	2.2%	-3.6%
Oil	8	12	16	22	23	24	23	4.7%	2.5%	3.3%	0.5%	0.5%	-0.5%
Gas	9	11	18	18	20	20	19	2.3%	5.4%	-0.4%	1.0%	0.3%	-0.3%
Electricity	4	5	7	9	14	20	26	2.2%	3.9%	3.0%	3.9%	3.6%	2.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	3	3	4	7	11	14	16	1.7%	2.3%	4.9%	4.6%	2.3%	1.8%
<b>Buildings</b>	<b>19</b>	<b>20</b>	<b>25</b>	<b>28</b>	<b>33</b>	<b>41</b>	<b>49</b>	<b>0.8%</b>	<b>2.1%</b>	<b>1.0%</b>	<b>1.8%</b>	<b>2.1%</b>	<b>1.8%</b>
Coal	0	0	0	0	0	0	0	-5.9%	-3.0%	2.1%	-0.8%	-1.1%	-1.4%
Oil	5	5	5	5	4	4	3	0.5%	0.3%	-0.3%	-1.7%	-0.6%	-1.1%
Gas	1	2	3	4	6	6	6	9.7%	3.8%	4.0%	3.0%	1.0%	-0.9%
Electricity	4	7	10	12	15	20	26	4.2%	4.1%	1.9%	2.3%	2.7%	2.7%
Heat	0	0	0	0	1	2	4	n.s.	-17.4%	39.0%	15.0%	10.0%	6.1%
Biomass & Other	9	7	7	7	8	9	10	-2.5%	0.6%	-1.0%	1.6%	1.4%	1.1%
<b>Agriculture</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>2.4%</b>	<b>2.4%</b>	<b>2.3%</b>	<b>1.4%</b>	<b>1.5%</b>	<b>1.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	0.0%	0.0%	0.0%
Oil	1	1	2	3	3	4	4	7.2%	2.9%	3.0%	1.6%	1.6%	1.5%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	-5.6%	1.4%	1.4%	1.3%
Electricity	0	0	0	1	1	1	1	7.7%	5.2%	3.5%	2.5%	2.4%	2.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	1	1	1	1	1	1	-3.4%	0.2%	0.0%	0.0%	0.0%	0.0%
<b>Transport</b>	<b>22</b>	<b>27</b>	<b>39</b>	<b>60</b>	<b>77</b>	<b>92</b>	<b>104</b>	<b>2.0%</b>	<b>3.7%</b>	<b>4.3%</b>	<b>2.6%</b>	<b>1.8%</b>	<b>1.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	22	27	38	57	69	75	74	1.9%	3.4%	4.3%	1.9%	0.8%	-0.2%
Gas	0	0	1	1	2	3	4	29.8%	22.3%	-1.7%	4.7%	4.1%	3.0%
Electricity	0	0	0	0	2	6	11	0.7%	1.3%	7.0%	42.4%	11.2%	6.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	4	8	16	-22.0%	n.s.	20.4%	11.5%	8.0%	6.8%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>13</b>	<b>18</b>	<b>17</b>	<b>20</b>	<b>31</b>	<b>51</b>	<b>82</b>	<b>3.4%</b>	<b>-0.7%</b>	<b>1.8%</b>	<b>4.6%</b>	<b>5.0%</b>	<b>4.9%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

<b>Egypt</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	56	68	82	101	117	134	151	1.9%	1.8%	2.1%	1.5%	1.4%	1.2%
GDP per capita (ppp, k\$'05)	3	4	5	6	9	13	17	2.3%	2.9%	1.3%	3.7%	3.6%	2.7%
GDP per capita (mer, k\$'05)	1	1	1	2	2	3	4	2.3%	2.9%	1.3%	3.7%	3.6%	2.7%
Share Value Added - Agriculture (%)	19	17	14	13	10	9	8	-1.4%	-1.8%	-0.8%	-2.4%	-1.6%	-0.9%
Share Value Added - Industry (%)	29	33	38	39	40	37	34	1.5%	1.3%	0.5%	0.0%	-0.6%	-0.9%
Share Value Added - Services (%)	52	50	48	48	50	54	58	-0.4%	-0.3%	-0.2%	0.6%	0.7%	0.7%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	17	19	-6.5%	7.4%	-4.3%	1.2%	2.1%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	18	21	30	38	52	70	93	1.4%	3.8%	2.2%	3.3%	3.0%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	144	175	279	341	437	589	723	2.0%	4.8%	2.0%	2.5%	3.0%	2.1%
Total GHG (excl. sinks)	144	175	280	342	437	589	723	2.0%	4.8%	2.0%	2.5%	3.0%	2.1%
Total GHG (energy, industry, agriculture)	144	175	280	342	437	589	723	2.0%	4.8%	2.0%	2.5%	3.0%	2.1%
CO <sub>2</sub>	98	119	203	256	337	470	588	2.0%	5.5%	2.3%	2.8%	3.4%	2.3%
CH <sub>4</sub>	25	36	48	51	58	70	82	3.7%	3.0%	0.5%	1.3%	1.9%	1.6%
N <sub>2</sub> O	19	18	24	31	37	43	48	-0.8%	3.2%	2.5%	1.9%	1.6%	0.9%
F gases	2	3	4	4	5	6	7	3.5%	2.8%	0.7%	1.6%	1.8%	1.4%
Total GHG from Energy and Industry	125	150	251	305	396	543	675	1.8%	5.3%	1.9%	2.7%	3.2%	2.2%
CO <sub>2</sub> Emissions from Fuel Comb.	86	102	177	223	290	407	512	1.7%	5.7%	2.3%	2.7%	3.5%	2.3%
Power generation/District heating	22	27	62	82	99	151	209	2.0%	8.7%	2.9%	1.9%	4.3%	3.3%
Industry	28	26	38	41	55	73	84	-0.5%	3.6%	0.8%	3.1%	2.8%	1.3%
Buildings	10	12	17	17	24	34	41	1.8%	3.8%	-0.2%	3.6%	3.3%	2.0%
Agriculture	0	0	7	8	9	11	13	n.s.	40.8%	1.1%	1.8%	1.8%	1.6%
Transport	16	29	38	59	81	109	129	6.1%	2.8%	4.6%	3.3%	3.0%	1.7%
Other	11	8	16	16	21	29	36	-2.5%	6.8%	0.3%	2.4%	3.3%	2.3%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	4.4%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	4.3%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	4.2%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	4.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	53	58	89	97	121	165	212	0.9%	4.4%	0.8%	2.3%	3.1%	2.5%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	44	38	36	26	21	18	18	-1.4%	-0.7%	-3.2%	-2.2%	-1.1%	0.0%
Natural gas	7	17	51	67	94	136	177	9.9%	11.4%	2.8%	3.5%	3.7%	2.7%
Biomass	2	1	2	1	1	2	2	-1.7%	1.7%	-1.8%	1.1%	1.5%	1.1%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	9.9%	20.4%
Hydro	1	1	1	1	1	1	1	3.3%	-0.5%	0.5%	0.8%	0.2%	0.2%
Other renewables	0	0	0	2	4	8	13	14.1%	16.0%	27.3%	9.1%	7.5%	5.6%
Net Imports	-21	-17	-17	-6	0	4	-1						
Coal	1	1	1	2	7	17	33						
Oil	-21	-16	-2	16	29	43	50						
Natural gas	0	-3	-15	-24	-36	-56	-84						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	33	41	73	91	121	170	211	2.2%	5.9%	2.2%	2.9%	3.4%	2.2%
Coal	1	1	1	2	7	17	33	2.8%	-6.7%	14.1%	12.8%	10.1%	6.9%
Oil	23	23	34	42	50	61	68	0.0%	4.0%	2.1%	1.8%	2.1%	1.1%
Natural gas	7	14	36	43	58	81	93	7.9%	9.5%	1.9%	3.0%	3.3%	1.4%
Biomass	2	1	2	1	1	2	2	-1.9%	1.7%	-1.7%	1.1%	1.5%	0.9%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	9.9%	20.4%
Hydro	1	1	1	1	1	1	1	3.3%	-0.5%	0.5%	0.8%	0.2%	0.2%
Other renewables	0	0	0	2	4	8	13	14.1%	16.0%	27.3%	9.1%	7.5%	5.6%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	33	41	73	91	121	170	211	2.2%	5.9%	2.2%	2.9%	3.4%	2.2%
Energy for Power Generation	9	12	26	35	43	63	84	3.1%	8.0%	3.2%	2.0%	3.9%	2.9%
Other Energy Transformation & Losses	4	3	5	3	5	9	12	-1.1%	4.6%	-5.3%	5.8%	5.7%	2.9%
Final consumption	24	31	52	67	92	127	157	2.8%	5.3%	2.5%	3.2%	3.3%	2.1%
Steel, Non-Met. Minerals and Chem.	1	1	0	1	1	0	0	1.0%	-6.0%	3.7%	3.5%	-7.2%	-20.1%
Other Industry	10	9	14	16	21	29	35	-0.3%	4.1%	1.3%	2.9%	3.3%	1.8%
Non-Energy Use	2	3	7	8	12	17	20	4.0%	8.1%	1.0%	4.2%	3.6%	1.9%
Residential	5	7	12	13	17	23	28	2.9%	4.9%	1.3%	2.5%	3.0%	2.2%
Services	0	1	2	3	4	7	11	11.3%	6.9%	2.6%	3.7%	5.2%	4.1%
Agriculture	0	0	3	4	4	5	6	9.9%	24.6%	3.1%	2.0%	2.1%	1.9%
Road	5	8	13	22	30	42	52	4.9%	5.2%	4.9%	3.5%	3.3%	2.0%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	4.1%	3.9%	3.1%
Aviation	0	0	1	1	1	2	3	8.0%	2.5%	4.3%	4.6%	5.0%	3.5%
Other Transport	0	1	1	0	1	1	1	n.s.	-3.5%	-4.4%	4.2%	3.6%	2.6%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%



<b>Egypt</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>8</b>	<b>11</b>	<b>25</b>	<b>33</b>	<b>38</b>	<b>54</b>	<b>69</b>	<b>3.1%</b>	<b>8.6%</b>	<b>2.8%</b>	<b>1.5%</b>	<b>3.6%</b>	<b>2.5%</b>
Coal	0	0	0	1	4	14	28	n.s.	n.s.	n.s.	16.6%	12.0%	7.3%
Oil	4	2	5	5	4	3	3	-6.9%	10.1%	0.2%	-2.9%	-1.3%	-0.1%
Gas	4	9	20	27	30	37	38	8.3%	8.3%	3.1%	1.1%	2.1%	0.3%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	24.8%	10.4%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>42</b>	<b>78</b>	<b>147</b>	<b>205</b>	<b>263</b>	<b>398</b>	<b>548</b>	<b>6.3%</b>	<b>6.5%</b>	<b>3.4%</b>	<b>2.5%</b>	<b>4.2%</b>	<b>3.3%</b>
Coal	0	0	0	5	22	72	149	n.s.	n.s.	n.s.	16.9%	12.4%	7.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	13	22	20	23	17	15	15	5.2%	-1.2%	1.3%	-2.9%	-1.2%	0.0%
Gas	19	42	112	147	168	209	220	8.3%	10.3%	2.8%	1.3%	2.2%	0.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	25.1%	11.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	10	14	13	14	15	15	15	3.3%	-0.5%	0.5%	0.8%	0.2%	0.2%
Wind	0	0	1	16	37	72	109	n.s.	23.7%	30.2%	8.8%	6.8%	4.2%
Solar	0	0	0	0	4	14	38	n.s.	n.s.	4.2%	24.0%	14.5%	10.8%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	19.2%	15.4%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>12</b>	<b>19</b>	<b>27</b>	<b>49</b>	<b>66</b>	<b>103</b>	<b>146</b>	<b>5.1%</b>	<b>3.3%</b>	<b>6.3%</b>	<b>3.0%</b>	<b>4.6%</b>	<b>3.6%</b>
Coal	0	0	0	1	3	10	22	n.s.	n.s.	n.s.	17.1%	12.7%	7.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	4	6	5	5	5	4	4	3.5%	-2.5%	0.4%	0.6%	-3.1%	0.2%
Gas	5	10	18	33	36	46	49	8.3%	6.2%	6.1%	0.8%	2.7%	0.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	25.3%	11.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	3	3	3	3	3	3	3	0.3%	0.2%	0.8%	0.8%	0.2%	0.2%
Wind	0	0	1	7	16	31	45	n.s.	40.0%	29.1%	8.6%	6.7%	3.9%
Solar	0	0	0	0	2	8	22	n.s.	n.s.	21.1%	24.5%	14.5%	10.8%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	18.6%	14.9%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>24</b>	<b>31</b>	<b>52</b>	<b>67</b>	<b>92</b>	<b>127</b>	<b>157</b>	<b>2.8%</b>	<b>5.3%</b>	<b>2.5%</b>	<b>3.2%</b>	<b>3.3%</b>	<b>2.1%</b>
Coal	1	1	0	1	2	3	4	1.0%	-6.0%	8.0%	8.3%	4.3%	4.0%
Oil	16	20	29	36	46	57	64	2.2%	3.9%	2.3%	2.3%	2.3%	1.2%
Gas	2	4	11	14	24	37	46	5.0%	10.7%	2.3%	5.6%	4.4%	2.2%
Electricity	3	6	11	14	18	28	39	5.9%	6.8%	3.0%	2.5%	4.3%	3.3%
Heat	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	4.8%	2.8%	6.0%
Biomass & Other	2	1	2	1	2	2	3	-1.9%	1.7%	-1.6%	2.0%	3.3%	3.8%
Share of Renewables <sup>3</sup> (%)	11%	8%	6%	6%	8%	10%	13%	-2.6%	-3.7%	0.8%	2.2%	2.4%	2.6%
<b>Industry (incl. non-energy use)</b>	<b>12</b>	<b>13</b>	<b>21</b>	<b>24</b>	<b>34</b>	<b>46</b>	<b>55</b>	<b>0.6%</b>	<b>4.9%</b>	<b>1.3%</b>	<b>3.3%</b>	<b>3.2%</b>	<b>1.7%</b>
Coal	1	1	0	1	2	3	4	1.0%	-6.0%	8.0%	8.3%	4.3%	4.0%
Oil	7	7	8	8	10	12	13	-0.9%	1.3%	0.5%	2.2%	1.9%	0.9%
Gas	2	4	10	11	16	22	25	4.4%	10.4%	1.1%	3.8%	3.4%	1.3%
Electricity	1	2	4	4	6	9	12	3.8%	5.2%	2.3%	2.6%	4.4%	3.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	0	0	0	0	0	0	n.s.	n.s.	n.s.	19.9%	5.4%	-0.1%
<b>Buildings</b>	<b>6</b>	<b>8</b>	<b>14</b>	<b>16</b>	<b>21</b>	<b>30</b>	<b>39</b>	<b>3.7%</b>	<b>5.2%</b>	<b>1.5%</b>	<b>2.8%</b>	<b>3.5%</b>	<b>2.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	4	5	4	3	2	2	1.3%	3.2%	-3.0%	-2.2%	-1.7%	-1.9%
Gas	0	0	1	2	6	11	15	16.9%	9.7%	10.9%	10.4%	5.6%	2.9%
Electricity	2	3	7	9	11	15	21	7.5%	7.7%	2.8%	1.9%	3.7%	3.1%
Heat	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	4.8%	2.8%	6.0%
Biomass & Other	1	1	2	1	1	1	1	2.1%	1.7%	-2.2%	-1.5%	-1.3%	1.0%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>9.9%</b>	<b>24.6%</b>	<b>3.1%</b>	<b>2.0%</b>	<b>2.1%</b>	<b>1.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	2	2	3	4	4	n.s.	40.8%	1.1%	1.8%	1.8%	1.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	1	1	2	2	6.9%	6.9%	10.0%	2.6%	2.7%	2.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>5</b>	<b>9</b>	<b>14</b>	<b>23</b>	<b>32</b>	<b>45</b>	<b>56</b>	<b>5.9%</b>	<b>4.6%</b>	<b>4.7%</b>	<b>3.6%</b>	<b>3.4%</b>	<b>2.1%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	5	9	14	22	30	39	45	5.9%	4.3%	4.7%	3.0%	2.7%	1.4%
Gas	0	0	0	1	2	3	6	n.s.	n.s.	4.1%	11.8%	7.9%	5.2%
Electricity	0	0	0	0	1	2	4	n.s.	n.s.	n.s.	29.8%	11.3%	6.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	23.1%	12.4%	7.8%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>4</b>	<b>3</b>	<b>5</b>	<b>3</b>	<b>5</b>	<b>9</b>	<b>12</b>	<b>-1.1%</b>	<b>4.6%</b>	<b>-5.3%</b>	<b>5.8%</b>	<b>5.7%</b>	<b>2.9%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Algeria & Libya	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	30	37	42	50	56	60	65	1.9%	1.5%	1.6%	1.1%	0.8%	0.7%
GDP per capita (ppp, k\$'05)	5	7	6	8	12	16	20	2.9%	-0.7%	2.6%	3.8%	3.1%	2.3%
GDP per capita (mer, k\$'05)	2	3	4	4	6	9	11	3.7%	2.6%	0.8%	3.8%	3.1%	2.3%
Share Value Added - Agriculture (%)	8	5	9	8	7	6	6	-3.4%	4.6%	-0.8%	-1.9%	-1.1%	-0.6%
Share Value Added - Industry (%)	33	36	51	48	46	42	38	1.0%	3.6%	-0.6%	-0.5%	-0.9%	-1.0%
Share Value Added - Services (%)	59	58	40	44	47	52	57	-0.2%	-3.7%	0.9%	0.8%	0.9%	0.8%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	17	19	-6.5%	7.4%	-4.3%	1.2%	2.1%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	18	21	30	38	52	70	93	1.4%	3.8%	2.2%	3.3%	3.0%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	170	204	264	344	458	568	642	1.9%	2.6%	2.7%	2.9%	2.2%	1.2%
Total GHG (excl. sinks)	170	205	265	345	459	568	644	1.9%	2.6%	2.7%	2.9%	2.2%	1.3%
Total GHG (energy, industry, agriculture)	168	203	262	342	456	565	642	1.9%	2.6%	2.7%	2.9%	2.2%	1.3%
CO <sub>2</sub>	114	140	190	272	379	481	556	2.1%	3.1%	3.7%	3.4%	2.4%	1.4%
CH <sub>4</sub>	48	57	64	59	63	68	69	1.7%	1.2%	-0.9%	0.7%	0.7%	0.1%
N <sub>2</sub> O	6	5	7	10	12	14	15	-0.4%	2.9%	3.6%	2.1%	1.4%	0.7%
F gases	1	1	1	1	2	2	2	4.0%	3.0%	1.0%	2.6%	2.1%	1.3%
Total GHG from Energy and Industry	160	195	253	329	442	549	625	2.0%	2.7%	2.7%	3.0%	2.2%	1.3%
CO <sub>2</sub> Emissions from Fuel Comb.	81	109	156	229	324	416	484	3.0%	3.7%	3.9%	3.5%	2.5%	1.5%
Power generation/District heating	18	32	47	59	97	141	181	5.8%	4.1%	2.3%	5.0%	3.8%	2.5%
Industry	11	15	20	22	26	29	29	2.7%	2.8%	1.3%	1.7%	0.9%	0.0%
Buildings	9	13	19	31	36	41	45	3.7%	3.7%	4.9%	1.5%	1.4%	0.8%
Agriculture	0	0	0	0	0	0	0	0.9%	17.6%	1.3%	1.7%	1.4%	1.2%
Transport	18	23	45	83	118	143	153	2.7%	7.1%	6.3%	3.5%	1.9%	0.7%
Other	25	26	24	32	47	62	77	0.5%	-0.7%	3.0%	3.7%	2.9%	2.1%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	4.0%	1.5%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	4.1%	1.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	3.8%	1.3%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	4.1%	1.5%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	183	224	246	229	286	315	314	2.0%	0.9%	-0.7%	2.2%	1.0%	0.0%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	137	149	165	140	151	165	172	0.9%	1.0%	-1.6%	0.8%	0.9%	0.4%
Natural gas	46	74	81	88	134	148	140	4.9%	0.8%	0.9%	4.2%	1.0%	-0.6%
Biomass	0	0	0	1	1	1	1	3.6%	1.1%	10.6%	4.9%	3.6%	-1.5%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	11.3%	8.5%	1.3%
Hydro	0	0	0	0	0	0	0	-8.8%	12.4%	9.9%	0.4%	0.5%	0.6%
Other renewables	0	0	0	0	0	0	1	n.s.	n.s.	13.3%	9.9%	12.0%	11.0%
Net Imports	-150	-180	-184	-140	-158	-150	-119						
Coal	1	1	1	1	1	2	3						
Oil	-121	-127	-133	-94	-90	-94	-98						
Natural gas	-30	-53	-51	-46	-69	-58	-25						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	33	44	62	89	128	165	195	2.9%	3.4%	3.8%	3.6%	2.6%	1.6%
Coal	1	1	1	1	1	2	3	0.7%	-3.1%	0.7%	7.3%	6.2%	4.8%
Oil	16	22	32	46	61	72	74	3.2%	3.7%	3.7%	2.9%	1.7%	0.2%
Natural gas	16	21	29	42	65	90	115	2.6%	3.3%	3.8%	4.3%	3.3%	2.5%
Biomass	0	0	0	0	1	2	2	3.6%	1.1%	8.6%	6.9%	4.6%	0.5%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	11.3%	8.5%	1.3%
Hydro	0	0	0	0	0	0	0	-8.8%	12.4%	9.9%	0.4%	0.5%	0.6%
Other renewables	0	0	0	0	0	0	1	n.s.	n.s.	13.3%	9.9%	12.0%	11.0%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	33	44	62	89	128	165	195	2.9%	3.4%	3.8%	3.6%	2.6%	1.6%
Energy for Power Generation	7	12	19	24	39	57	74	5.8%	4.5%	2.6%	5.0%	3.8%	2.7%
Other Energy Transformation & Losses	10	11	9	11	17	24	30	0.4%	-1.3%	2.1%	4.3%	3.3%	2.3%
Final consumption	18	24	39	61	83	103	116	3.0%	5.0%	4.5%	3.2%	2.2%	1.2%
Steel, Non-Met. Minerals and Chem.	2	2	3	4	4	4	4	1.2%	5.6%	3.2%	0.1%	-0.5%	-1.2%
Other Industry	2	3	3	4	6	8	9	3.0%	2.3%	2.7%	3.6%	2.6%	1.3%
Non-Energy Use	3	5	5	5	8	9	10	3.5%	1.4%	0.3%	3.3%	2.2%	1.0%
Residential	4	6	8	13	15	18	20	4.6%	3.1%	5.2%	1.7%	1.6%	1.0%
Services	0	1	3	4	6	9	12	4.3%	18.4%	2.2%	4.7%	3.8%	2.8%
Agriculture	0	0	0	0	0	0	0	0.9%	10.0%	-2.8%	2.4%	2.1%	1.9%
Road	7	8	16	29	42	53	60	2.2%	6.5%	6.4%	3.9%	2.4%	1.2%
Rail	0	0	0	0	0	0	0	1.4%	9.3%	2.4%	0.6%	0.5%	0.3%
Aviation	0	0	0	0	0	0	0	7.2%	26.3%	-1.3%	4.2%	3.2%	0.7%
Other Transport	0	0	0	0	0	0	0	0.9%	9.8%	4.7%	3.9%	2.4%	1.6%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Algeria & Libya	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>7</b>	<b>12</b>	<b>19</b>	<b>24</b>	<b>39</b>	<b>57</b>	<b>73</b>	<b>5.8%</b>	<b>4.5%</b>	<b>2.6%</b>	<b>5.0%</b>	<b>3.8%</b>	<b>2.6%</b>
Coal	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	19.5%	11.6%	7.1%
Oil	3	5	5	4	6	8	7	5.1%	0.5%	-1.6%	4.1%	2.7%	-1.0%
Gas	4	7	14	20	32	47	63	6.3%	6.5%	3.7%	5.1%	3.8%	3.0%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	29.7%	9.8%	4.6%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>27</b>	<b>43</b>	<b>81</b>	<b>119</b>	<b>200</b>	<b>302</b>	<b>406</b>	<b>4.6%</b>	<b>6.5%</b>	<b>3.9%</b>	<b>5.4%</b>	<b>4.2%</b>	<b>3.0%</b>
Coal	0	0	0	0	2	7	14	n.s.	n.s.	n.s.	19.9%	11.9%	7.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	11	13	18	18	26	35	32	1.5%	3.6%	-0.4%	4.1%	2.8%	-0.8%
Gas	16	30	62	99	169	255	348	6.4%	7.6%	4.8%	5.5%	4.2%	3.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	30.9%	10.2%	5.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	10.9%	7.5%	0.2%
Hydro	0	0	0	0	0	0	1	-8.8%	12.4%	9.9%	0.4%	0.5%	0.6%
Wind	0	0	0	0	1	2	6	n.s.	n.s.	n.s.	21.8%	13.4%	9.8%
Solar	0	0	0	1	1	2	4	n.s.	n.s.	11.4%	5.3%	7.4%	8.3%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	18.2%	13.7%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>8</b>	<b>11</b>	<b>20</b>	<b>25</b>	<b>33</b>	<b>48</b>	<b>68</b>	<b>2.7%</b>	<b>6.3%</b>	<b>2.4%</b>	<b>2.7%</b>	<b>3.9%</b>	<b>3.5%</b>
Coal	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	20.0%	12.0%	7.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	4	4	4	4	5	7	7	-0.5%	-0.1%	1.2%	1.3%	2.6%	0.2%
Gas	4	6	15	20	26	38	54	5.8%	9.1%	2.6%	2.8%	3.8%	3.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	31.1%	10.3%	4.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	7.2%	0.0%
Hydro	0	0	0	0	0	0	0	-0.4%	0.0%	-1.3%	0.4%	0.5%	0.6%
Wind	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	21.4%	13.2%	9.6%
Solar	0	0	0	0	1	1	2	n.s.	n.s.	11.4%	5.4%	7.5%	8.4%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	13.2%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>18</b>	<b>24</b>	<b>39</b>	<b>61</b>	<b>83</b>	<b>103</b>	<b>116</b>	<b>3.0%</b>	<b>5.0%</b>	<b>4.5%</b>	<b>3.2%</b>	<b>2.2%</b>	<b>1.2%</b>
Coal	0	0	0	0	1	1	1	-3.2%	-0.9%	1.7%	5.3%	2.2%	0.4%
Oil	11	14	23	38	50	58	60	2.3%	4.9%	5.0%	2.8%	1.5%	0.4%
Gas	4	7	10	15	20	25	29	4.6%	4.2%	3.9%	2.9%	2.3%	1.3%
Electricity	2	2	5	7	12	17	24	4.7%	7.8%	2.7%	5.4%	4.2%	3.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	33.9%	17.8%
Biomass & Other	0	0	0	1	1	2	3	3.6%	1.1%	14.3%	4.3%	5.3%	4.2%
Share of Renewables <sup>3</sup> (%)	1%	1%	1%	1%	1%	1%	2%	0.0%	-3.0%	2.0%	1.1%	4.1%	4.6%
<b>Industry (incl. non-energy use)</b>	<b>7</b>	<b>9</b>	<b>12</b>	<b>14</b>	<b>18</b>	<b>22</b>	<b>23</b>	<b>2.9%</b>	<b>2.6%</b>	<b>1.8%</b>	<b>2.6%</b>	<b>1.8%</b>	<b>0.8%</b>
Coal	0	0	0	0	1	1	1	-3.2%	-0.9%	1.7%	5.3%	2.2%	0.4%
Oil	2	3	4	5	6	6	6	2.5%	2.8%	0.9%	2.1%	1.2%	0.2%
Gas	3	5	6	7	8	9	10	3.7%	2.4%	1.3%	1.8%	1.3%	0.4%
Electricity	1	1	1	2	4	5	6	2.7%	4.0%	6.0%	5.1%	3.5%	2.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-1.1%	0.7%	-0.6%
<b>Buildings</b>	<b>4</b>	<b>6</b>	<b>11</b>	<b>17</b>	<b>22</b>	<b>27</b>	<b>32</b>	<b>4.6%</b>	<b>5.6%</b>	<b>4.4%</b>	<b>2.5%</b>	<b>2.2%</b>	<b>1.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	3	3	4	4	4	4	2.3%	1.0%	2.9%	-0.3%	-0.1%	-0.2%
Gas	1	2	4	8	10	13	14	6.9%	7.5%	6.7%	2.5%	2.1%	1.1%
Electricity	1	1	4	4	7	10	13	6.6%	9.5%	1.7%	4.7%	3.7%	2.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	33.9%	17.8%
Biomass & Other	0	0	0	1	1	1	1	3.6%	1.1%	13.5%	1.0%	0.6%	0.1%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.9%</b>	<b>10.0%</b>	<b>-2.8%</b>	<b>2.4%</b>	<b>2.1%</b>	<b>1.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	0.9%	11.8%	0.1%	1.8%	1.5%	1.3%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	3.0%	1.6%	1.3%	1.1%
Electricity	0	0	0	0	0	0	0	1.0%	8.8%	-3.9%	2.6%	2.4%	2.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>7</b>	<b>8</b>	<b>16</b>	<b>29</b>	<b>43</b>	<b>54</b>	<b>60</b>	<b>2.2%</b>	<b>6.6%</b>	<b>6.3%</b>	<b>3.8%</b>	<b>2.3%</b>	<b>1.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	7	8	16	29	40	47	50	2.2%	6.6%	6.2%	3.3%	1.7%	0.4%
Gas	0	0	0	0	1	3	5	n.s.	n.s.	n.s.	28.4%	7.8%	4.4%
Electricity	0	0	0	0	1	2	4	3.0%	6.5%	6.1%	26.0%	10.5%	5.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	33.8%	12.0%	6.7%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>10</b>	<b>11</b>	<b>9</b>	<b>11</b>	<b>17</b>	<b>24</b>	<b>30</b>	<b>0.4%</b>	<b>-1.3%</b>	<b>2.1%</b>	<b>4.3%</b>	<b>3.3%</b>	<b>2.3%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Morocco & Tunisia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	33	39	43	49	53	56	58	1.6%	1.1%	1.2%	0.8%	0.5%	0.3%
GDP per capita (ppp, k\$'05)	3	4	5	7	11	16	23	1.7%	3.7%	3.2%	4.2%	4.1%	3.4%
GDP per capita (mer, k\$'05)	2	2	3	4	5	8	11	1.9%	3.7%	3.1%	4.2%	4.1%	3.4%
Share Value Added - Agriculture (%)	18	14	13	10	8	7	6	-2.8%	-0.5%	-2.4%	-2.3%	-1.5%	-0.9%
Share Value Added - Industry (%)	33	30	30	30	30	26	23	-1.2%	0.2%	0.1%	-0.3%	-1.1%	-1.6%
Share Value Added - Services (%)	48	57	57	59	62	67	71	1.6%	0.0%	0.4%	0.5%	0.7%	0.7%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	17	19	-6.5%	7.4%	-4.3%	1.2%	2.1%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	18	21	30	38	52	70	93	1.4%	3.8%	2.2%	3.3%	3.0%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	51	69	103	144	207	279	316	3.1%	4.1%	3.4%	3.7%	3.0%	1.3%
Total GHG (excl. sinks)	60	79	103	144	208	279	320	2.9%	2.7%	3.4%	3.7%	3.0%	1.4%
Total GHG (energy, industry, agriculture)	59	78	103	143	208	276	320	2.9%	2.8%	3.3%	3.8%	2.9%	1.5%
CO <sub>2</sub>	37	54	76	112	167	226	266	3.8%	3.5%	3.9%	4.1%	3.1%	1.6%
CH <sub>4</sub>	13	16	18	22	30	37	40	2.1%	1.3%	1.7%	3.2%	2.1%	0.9%
N <sub>2</sub> O	8	8	8	9	11	13	14	-0.2%	0.6%	1.3%	1.7%	1.4%	0.7%
F gases	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Total GHG from Energy and Industry	46	65	89	128	191	257	300	3.5%	3.3%	3.7%	4.1%	3.0%	1.6%
CO <sub>2</sub> Emissions from Fuel Comb.	32	47	67	99	148	202	239	3.9%	3.5%	4.0%	4.1%	3.2%	1.7%
Power generation/District heating	12	17	24	38	63	93	115	3.9%	3.6%	4.7%	5.1%	4.0%	2.2%
Industry	9	9	11	18	25	32	34	0.2%	2.3%	5.0%	3.6%	2.4%	0.7%
Buildings	3	5	7	9	17	24	29	5.8%	2.9%	2.9%	6.6%	3.7%	1.7%
Agriculture	2	3	5	7	8	9	11	6.6%	4.7%	2.6%	1.7%	1.7%	1.5%
Transport	6	12	17	23	29	36	40	6.4%	3.9%	3.2%	2.3%	2.0%	1.0%
Other	2	2	3	4	6	8	11	2.3%	5.0%	2.8%	3.5%	3.8%	2.9%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	18.4%	5.8%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.9%	5.7%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	18.1%	5.7%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	19.5%	6.1%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	7	8	9	8	12	17	21	0.8%	1.9%	-0.9%	3.7%	3.3%	2.6%
Coal	0	0	0	0	0	0	0	-22.8%	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	5	4	4	3	4	5	6	-2.1%	0.2%	-2.6%	3.1%	2.3%	1.7%
Natural gas	0	2	2	3	4	6	8	17.5%	3.7%	1.5%	3.8%	4.4%	2.7%
Biomass	1	2	2	2	2	2	2	2.7%	1.8%	-3.2%	2.9%	-0.2%	-0.2%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	10.6%	14.4%
Hydro	0	0	0	0	0	0	0	-4.7%	16.8%	-2.9%	0.7%	0.5%	0.6%
Other renewables	0	0	0	1	1	3	5	n.s.	29.1%	19.2%	9.1%	7.2%	5.9%
Net Imports	6	11	17	28	41	55	63						
Coal	1	3	3	7	15	24	31						
Oil	4	7	11	16	17	18	18						
Natural gas	1	1	3	5	10	13	14						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	12	18	27	37	53	71	84	3.8%	3.9%	3.2%	3.9%	2.9%	1.7%
Coal	1	3	3	7	15	24	31	8.2%	0.1%	9.5%	7.7%	5.0%	2.6%
Oil	8	10	15	19	21	23	24	2.2%	4.0%	2.2%	1.0%	0.9%	0.3%
Natural gas	1	3	5	8	14	19	22	8.2%	6.9%	3.6%	5.9%	3.4%	1.5%
Biomass	1	2	2	2	2	2	2	2.7%	1.8%	-3.0%	2.7%	-0.2%	-0.2%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	10.6%	14.4%
Hydro	0	0	0	0	0	0	0	-4.7%	16.8%	-2.9%	0.7%	0.5%	0.6%
Other renewables	0	0	0	1	1	3	5	n.s.	29.1%	19.2%	9.1%	7.2%	5.9%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	12	18	27	37	53	71	84	3.8%	3.9%	3.2%	3.9%	2.9%	1.7%
Energy for Power Generation	4	5	8	12	20	29	37	3.7%	4.4%	4.0%	4.8%	3.9%	2.5%
Other Energy Transformation & Losses	1	1	1	2	3	4	5	1.0%	9.6%	2.9%	4.8%	3.1%	2.4%
Final consumption	9	14	20	27	39	51	60	4.2%	3.7%	3.1%	3.7%	2.8%	1.6%
Steel, Non-Met. Minerals and Chem.	0	0	2	4	5	7	7	0.1%	20.9%	5.2%	3.3%	2.5%	1.0%
Other Industry	3	3	3	4	6	8	9	1.3%	-2.5%	4.9%	4.3%	2.7%	1.0%
Non-Energy Use	0	0	1	1	1	1	1	8.2%	4.4%	2.3%	1.1%	0.4%	-1.3%
Residential	2	3	5	5	7	10	11	4.5%	3.2%	1.2%	3.9%	2.6%	1.5%
Services	1	1	2	2	4	7	9	3.6%	4.9%	1.4%	7.7%	5.0%	3.2%
Agriculture	1	1	2	2	3	3	4	6.5%	5.0%	2.6%	1.8%	1.8%	1.6%
Road	2	4	6	8	11	14	16	6.1%	3.7%	3.4%	2.9%	2.5%	1.6%
Rail	0	0	0	0	0	0	0	5.6%	3.4%	1.5%	1.1%	1.0%	0.7%
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	7.5%	5.0%	4.4%	1.8%
Other Transport	0	0	1	1	1	2	2	9.9%	5.3%	3.8%	4.0%	3.1%	2.3%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Morocco & Tunisia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
Fuel Inputs Therm. Power (Mtoe)	4	5	8	11	18	26	32	3.8%	4.0%	3.8%	4.6%	3.7%	2.1%
Coal	1	2	3	6	12	19	24	10.9%	2.7%	8.5%	6.8%	4.7%	2.4%
Oil	2	1	1	1	1	1	1	-5.9%	1.8%	0.3%	-1.1%	0.2%	0.5%
Gas	1	2	4	4	5	5	6	9.2%	6.1%	0.1%	2.1%	1.3%	1.2%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	14.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Gross Elec. Generation (TWh <sub>e</sub> )	15	23	40	62	105	162	220	4.3%	5.5%	4.5%	5.4%	4.4%	3.1%
Coal	2	9	11	28	57	94	123	14.8%	2.2%	9.8%	7.5%	5.1%	2.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	8	5	6	6	5	5	6	-5.8%	2.4%	0.0%	-1.1%	0.3%	0.7%
Gas	4	9	19	20	25	29	33	9.6%	7.4%	0.6%	2.1%	1.5%	1.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	15.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	1	1	4	3	3	3	3	-4.7%	16.8%	-2.9%	0.7%	0.5%	0.6%
Wind	0	0	1	5	12	23	36	n.s.	23.5%	22.4%	8.7%	6.3%	4.7%
Solar	0	0	0	1	3	8	18	n.s.	n.s.	20.2%	17.3%	11.4%	9.1%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	31.0%	19.1%	14.5%
Generation Capacity (GW <sub>e</sub> )	4	7	10	15	24	38	55	6.8%	3.5%	3.8%	4.8%	4.9%	3.8%
Coal	0	1	2	4	9	15	19	12.1%	2.1%	8.7%	7.7%	5.4%	2.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	2	2	2	1	1	1	3.4%	-0.6%	-2.2%	-4.5%	0.4%	0.4%
Gas	1	2	4	4	4	5	6	10.7%	7.7%	-0.2%	1.0%	1.8%	1.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	15.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	1	2	2	2	2	2	3	4.3%	1.4%	1.7%	0.7%	0.5%	0.6%
Wind	0	0	0	2	5	10	15	n.s.	18.7%	21.6%	8.5%	6.1%	4.4%
Solar	0	0	0	0	2	5	11	n.s.	n.s.	20.3%	17.3%	11.3%	9.0%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	18.5%	13.9%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>9</b>	<b>14</b>	<b>20</b>	<b>27</b>	<b>39</b>	<b>51</b>	<b>60</b>	<b>4.2%</b>	<b>3.7%</b>	<b>3.1%</b>	<b>3.7%</b>	<b>2.8%</b>	<b>1.6%</b>
Coal	0	1	0	1	2	4	5	2.8%	-30.6%	44.5%	13.5%	5.7%	2.6%
Oil	6	9	13	17	19	21	21	4.3%	4.1%	2.3%	1.1%	1.0%	0.3%
Gas	0	1	1	3	8	13	15	6.1%	5.9%	11.5%	9.2%	4.4%	1.7%
Electricity	1	2	3	5	8	12	16	5.2%	5.5%	3.9%	5.1%	4.3%	3.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	5.2%	-4.0%	-4.0%	7.4%
Biomass & Other	1	2	2	2	2	2	3	2.7%	1.8%	-3.2%	2.4%	1.0%	1.3%
Share of Renewables <sup>3</sup> (%)	17%	14%	13%	8%	9%	10%	13%	-1.6%	-0.6%	-4.3%	0.4%	1.2%	2.6%
<b>Industry (incl. non-energy use)</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>9</b>	<b>12</b>	<b>16</b>	<b>17</b>	<b>1.7%</b>	<b>3.1%</b>	<b>4.7%</b>	<b>3.6%</b>	<b>2.4%</b>	<b>0.9%</b>
Coal	0	1	0	1	2	4	5	2.8%	-30.6%	44.5%	13.5%	5.7%	2.6%
Oil	2	2	3	4	4	3	2	-0.4%	5.5%	2.5%	-1.0%	-1.7%	-3.0%
Gas	0	0	1	2	3	4	4	5.1%	5.5%	6.8%	5.5%	2.8%	0.0%
Electricity	1	1	1	2	3	5	6	4.3%	3.1%	5.7%	5.0%	3.6%	2.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	1.1%	0.4%	4.0%	0.7%	0.1%
<b>Buildings</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>12</b>	<b>16</b>	<b>20</b>	<b>4.2%</b>	<b>3.7%</b>	<b>1.3%</b>	<b>5.1%</b>	<b>3.5%</b>	<b>2.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	2	2	2	2	2	5.5%	2.5%	-2.0%	0.8%	0.8%	0.3%
Gas	0	0	0	2	5	8	10	10.1%	6.9%	18.8%	11.2%	4.8%	2.1%
Electricity	0	1	2	2	4	5	8	6.4%	7.6%	2.6%	4.5%	4.3%	3.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	5.2%	-4.0%	-4.0%	7.4%
Biomass & Other	1	2	2	1	1	1	1	2.3%	1.8%	-4.0%	-0.2%	-1.5%	-2.0%
<b>Agriculture</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>6.5%</b>	<b>5.0%</b>	<b>2.6%</b>	<b>1.8%</b>	<b>1.8%</b>	<b>1.6%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	2	2	2	3	3	6.6%	4.7%	2.6%	1.7%	1.7%	1.5%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	1.7%	1.5%	1.5%	1.3%
Electricity	0	0	0	0	0	0	1	6.1%	6.9%	2.5%	2.5%	2.5%	2.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>2</b>	<b>4</b>	<b>7</b>	<b>9</b>	<b>12</b>	<b>16</b>	<b>18</b>	<b>6.3%</b>	<b>3.8%</b>	<b>3.3%</b>	<b>3.0%</b>	<b>2.6%</b>	<b>1.6%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	4	6	9	11	13	14	6.3%	3.8%	3.1%	1.9%	1.7%	0.7%
Gas	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	22.8%	7.7%	4.4%
Electricity	0	0	0	0	0	1	2	2.8%	-1.8%	7.9%	21.7%	9.8%	5.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	2	n.s.	n.s.	n.s.	17.3%	5.5%	4.6%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>1.0%</b>	<b>9.6%</b>	<b>2.9%</b>	<b>4.8%</b>	<b>3.1%</b>	<b>2.4%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

South Africa	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	37	45	52	57	60	63	66	2.0%	1.4%	0.9%	0.6%	0.5%	0.4%
GDP per capita (ppp, k\$'05)	8	7	9	10	14	18	22	-0.2%	2.1%	1.1%	2.8%	3.0%	1.8%
GDP per capita (mer, k\$'05)	5	5	6	6	8	11	14	-0.2%	2.0%	1.0%	2.8%	3.0%	1.8%
Share Value Added - Agriculture (%)	5	3	3	3	2	2	2	-3.4%	-2.4%	-0.2%	-0.7%	-0.5%	-0.3%
Share Value Added - Industry (%)	40	32	30	28	26	23	20	-2.3%	-0.6%	-0.6%	-0.9%	-1.3%	-1.0%
Share Value Added - Services (%)	55	65	68	69	72	75	77	1.6%	0.4%	0.3%	0.3%	0.4%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	17	19	-6.5%	7.4%	-4.3%	1.2%	2.1%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	18	21	30	38	52	70	93	1.4%	3.8%	2.2%	3.3%	3.0%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	354	404	514	524	597	713	759	1.3%	2.4%	0.2%	1.3%	1.8%	0.6%
Total GHG (excl. sinks)	354	407	514	524	597	714	760	1.4%	2.4%	0.2%	1.3%	1.8%	0.6%
Total GHG (energy, industry, agriculture)	350	404	513	511	586	676	731	1.4%	2.4%	0.0%	1.4%	1.4%	0.8%
CO <sub>2</sub>	278	326	429	424	483	556	608	1.6%	2.8%	-0.1%	1.3%	1.4%	0.9%
CH <sub>4</sub>	51	57	63	65	79	93	96	1.2%	1.0%	0.2%	2.1%	1.6%	0.3%
N <sub>2</sub> O	20	19	18	19	21	22	22	-0.4%	-0.4%	0.6%	0.7%	0.5%	0.3%
F gases	1	2	3	3	3	4	5	0.6%	5.2%	0.8%	2.0%	1.8%	0.9%
Total GHG from Energy and Industry	319	372	479	475	548	637	691	1.6%	2.6%	-0.1%	1.4%	1.5%	0.8%
CO <sub>2</sub> Emissions from Fuel Comb.	257	306	408	392	445	511	561	1.8%	2.9%	-0.4%	1.3%	1.4%	0.9%
Power generation/District heating	142	188	242	189	228	278	323	2.8%	2.6%	-2.4%	1.9%	2.0%	1.5%
Industry	35	33	45	36	36	36	33	-0.6%	3.1%	-2.3%	0.1%	0.1%	-1.0%
Buildings	11	9	17	28	27	27	25	-2.2%	6.3%	5.0%	-0.2%	-0.1%	-0.5%
Agriculture	3	4	3	6	7	8	9	2.1%	-1.1%	6.2%	1.3%	1.3%	1.0%
Transport	29	36	42	50	51	54	53	2.0%	1.5%	1.8%	0.2%	0.5%	-0.2%
Other	36	36	59	84	96	109	118	0.1%	5.0%	3.6%	1.4%	1.2%	0.9%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	39.5%	4.1%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	38.9%	4.1%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	4.1%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	4.1%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	110	151	165	164	292	461	522	3.2%	0.9%	-0.1%	5.9%	4.7%	1.2%
Coal	98	136	150	147	263	399	427	3.3%	1.0%	-0.2%	6.0%	4.2%	0.7%
Oil	0	1	0	0	0	0	0	n.s.	-16.6%	1.9%	1.9%	1.0%	0.3%
Natural gas	2	1	0	1	8	36	68	-0.8%	-10.4%	9.3%	21.0%	16.7%	6.4%
Biomass	8	9	11	9	12	14	15	1.9%	1.4%	-1.5%	2.6%	1.4%	0.6%
Nuclear <sup>1</sup>	2	3	3	4	4	6	4	4.4%	-0.7%	2.3%	0.2%	4.5%	-3.6%
Hydro	0	0	0	1	1	1	1	3.3%	2.6%	2.4%	2.2%	1.7%	1.7%
Other renewables	0	0	0	2	4	5	7	n.s.	n.s.	35.6%	6.8%	3.4%	2.8%
Net Imports	-22	-45	-25	-38	-147	-294	-343						
Coal	-30	-54	-48	-66	-169	-291	-308						
Oil	8	8	20	23	21	21	19						
Natural gas	-1	0	3	4	0	-26	-56						
Biomass	0	0	0	2	2	1	1						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	1	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	88	107	140	126	145	167	178	2.0%	2.8%	-1.0%	1.4%	1.4%	0.6%
Coal	69	82	102	80	94	108	119	1.8%	2.2%	-2.4%	1.6%	1.4%	1.0%
Oil	8	9	20	23	21	21	19	0.3%	8.5%	1.6%	-0.9%	-0.1%	-0.9%
Natural gas	0	1	4	5	7	11	12	10.9%	10.7%	2.3%	4.3%	3.6%	1.1%
Biomass	8	9	11	12	14	15	16	1.9%	1.4%	0.8%	1.8%	0.9%	0.2%
Nuclear <sup>1</sup>	2	3	3	4	4	6	4	4.4%	-0.7%	2.3%	0.2%	4.5%	-3.6%
Hydro	0	0	0	1	1	1	1	3.3%	2.6%	2.4%	2.2%	1.7%	1.7%
Other renewables	0	0	0	2	4	5	7	n.s.	n.s.	35.6%	6.8%	3.4%	2.8%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	88	107	140	126	145	167	178	2.0%	2.8%	-1.0%	1.4%	1.4%	0.6%
Energy for Power Generation	38	51	64	55	67	86	99	3.0%	2.4%	-1.6%	2.1%	2.4%	1.4%
Other Energy Transformation & Losses	10	14	23	16	21	26	29	3.9%	5.1%	-3.4%	2.5%	2.1%	1.3%
Final consumption	52	57	70	72	80	89	91	0.8%	2.1%	0.3%	1.1%	1.0%	0.2%
Steel, Non-Met. Minerals and Chem.	10	7	10	10	12	12	11	-3.5%	3.4%	-0.1%	1.7%	0.4%	-1.2%
Other Industry	13	14	18	15	16	18	18	1.0%	2.7%	-1.8%	0.9%	0.9%	0.1%
Non-Energy Use	4	6	4	2	2	2	2	2.8%	-2.6%	-5.8%	-0.1%	0.4%	-0.4%
Residential	10	12	15	16	16	16	16	1.5%	2.2%	0.9%	0.1%	0.0%	-0.6%
Services	3	4	5	6	8	10	11	2.5%	1.8%	2.6%	2.0%	2.3%	1.4%
Agriculture	1	2	2	2	3	3	4	1.8%	0.3%	4.3%	1.6%	1.6%	1.2%
Road	9	11	15	18	21	24	26	1.8%	3.0%	1.9%	1.3%	1.6%	0.7%
Rail	0	1	0	0	1	1	1	5.2%	-6.5%	3.0%	1.8%	1.9%	1.0%
Aviation	0	1	1	1	2	2	3	5.2%	5.0%	1.8%	3.4%	3.4%	1.7%
Other Transport	0	0	0	0	0	0	0	n.s.	4.5%	32.2%	2.3%	2.0%	0.8%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

South Africa	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>36</b>	<b>47</b>	<b>61</b>	<b>48</b>	<b>59</b>	<b>73</b>	<b>87</b>	<b>2.9%</b>	<b>2.6%</b>	<b>-2.3%</b>	<b>2.0%</b>	<b>2.2%</b>	<b>1.7%</b>
Coal	36	47	61	47	56	67	78	2.8%	2.6%	-2.6%	1.7%	1.9%	1.5%
Oil	0	0	0	0	0	1	1	n.s.	n.s.	21.6%	2.6%	4.3%	2.3%
Gas	0	0	0	1	2	4	5	n.s.	n.s.	n.s.	12.2%	6.4%	1.9%
Biomass & Waste	0	0	0	0	1	2	3	n.s.	-0.7%	15.8%	6.7%	8.7%	5.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>167</b>	<b>211</b>	<b>260</b>	<b>243</b>	<b>326</b>	<b>434</b>	<b>514</b>	<b>2.3%</b>	<b>2.1%</b>	<b>-0.7%</b>	<b>3.0%</b>	<b>2.9%</b>	<b>1.7%</b>
Coal	156	193	242	196	247	319	379	2.2%	2.3%	-2.1%	2.4%	2.6%	1.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	1	2	3	4	n.s.	n.s.	21.4%	2.8%	4.7%	2.6%
Gas	0	0	0	4	12	22	26	n.s.	n.s.	n.s.	11.2%	6.1%	2.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	1	3	9	16	n.s.	-0.7%	16.3%	9.8%	10.2%	6.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	8	13	12	15	15	25	17	4.4%	-0.7%	2.3%	0.2%	4.9%	-3.5%
Hydro	3	4	5	6	8	9	11	3.3%	2.6%	2.4%	2.2%	1.7%	1.7%
Wind	0	0	0	12	23	25	29	n.s.	n.s.	n.s.	6.4%	0.9%	1.4%
Solar	0	0	0	7	15	23	31	n.s.	n.s.	41.2%	8.3%	4.5%	2.9%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	26.8%	18.0%	13.6%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>35</b>	<b>41</b>	<b>44</b>	<b>59</b>	<b>74</b>	<b>95</b>	<b>112</b>	<b>1.7%</b>	<b>0.7%</b>	<b>2.9%</b>	<b>2.4%</b>	<b>2.5%</b>	<b>1.7%</b>
Coal	31	37	38	39	41	50	58	1.8%	0.2%	0.3%	0.6%	1.9%	1.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	1	29.8%	0.0%	-0.1%	-0.5%	4.6%	2.8%
Gas	0	0	2	3	4	6	6	n.s.	n.s.	5.1%	2.2%	3.0%	0.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	1	2	n.s.	0.0%	13.1%	8.4%	9.9%	6.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	2	2	2	2	2	3	2	0.0%	0.0%	0.3%	0.2%	4.9%	-3.5%
Hydro	2	2	2	3	4	4	5	0.3%	0.1%	4.2%	2.2%	1.7%	1.7%
Wind	0	0	0	5	9	10	12	n.s.	n.s.	n.s.	6.4%	1.0%	1.1%
Solar	0	0	0	6	13	20	26	n.s.	n.s.	47.5%	8.4%	4.4%	2.8%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.5%	13.1%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>52</b>	<b>57</b>	<b>70</b>	<b>72</b>	<b>80</b>	<b>89</b>	<b>91</b>	<b>0.8%</b>	<b>2.1%</b>	<b>0.3%</b>	<b>1.1%</b>	<b>1.0%</b>	<b>0.2%</b>
Coal	17	16	16	16	17	17	14	-0.9%	-0.1%	0.3%	0.8%	-0.3%	-1.4%
Oil	15	16	23	25	24	24	23	0.7%	3.6%	1.0%	-0.4%	0.1%	-0.5%
Gas	0	1	4	3	5	6	6	5.6%	15.2%	-0.2%	2.7%	2.5%	0.6%
Electricity	12	15	17	16	22	30	35	2.3%	1.5%	-0.6%	3.0%	3.0%	1.7%
Heat	0	0	0	0	0	1	2	n.s.	n.s.	13.5%	4.6%	9.1%	5.5%
Biomass & Other	8	9	11	11	12	12	10	1.8%	1.5%	0.1%	0.9%	-0.2%	-1.1%
Share of Renewables <sup>3</sup> (%)	16%	17%	16%	18%	20%	21%	23%	0.8%	-0.8%	1.2%	1.2%	0.3%	1.0%
<b>Industry (incl. non-energy use)</b>	<b>27</b>	<b>27</b>	<b>32</b>	<b>27</b>	<b>30</b>	<b>32</b>	<b>31</b>	<b>-0.2%</b>	<b>2.0%</b>	<b>-1.7%</b>	<b>1.1%</b>	<b>0.6%</b>	<b>-0.4%</b>
Coal	15	14	12	10	11	11	9	-0.4%	-1.5%	-2.3%	1.4%	-0.2%	-1.7%
Oil	4	2	4	4	3	3	2	-6.5%	9.4%	-2.1%	-1.9%	-1.3%	-2.8%
Gas	0	1	4	3	3	3	3	5.5%	15.6%	-1.4%	-0.7%	0.3%	-1.5%
Electricity	7	8	10	9	12	14	16	1.6%	2.2%	-0.9%	2.2%	2.0%	1.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	2	2	2	2	2	2	1.3%	1.6%	-1.9%	2.0%	-0.3%	-0.8%
<b>Buildings</b>	<b>14</b>	<b>16</b>	<b>20</b>	<b>23</b>	<b>24</b>	<b>26</b>	<b>26</b>	<b>1.7%</b>	<b>2.1%</b>	<b>1.4%</b>	<b>0.7%</b>	<b>0.8%</b>	<b>0.2%</b>
Coal	2	1	3	6	6	5	5	-4.6%	8.3%	6.2%	-0.3%	-0.6%	-0.9%
Oil	1	1	1	1	1	1	1	5.1%	1.6%	-1.6%	-3.0%	-0.9%	-1.2%
Gas	0	0	0	0	1	1	1	8.2%	-4.5%	25.3%	11.2%	6.3%	2.3%
Electricity	4	6	6	6	8	11	13	3.4%	0.7%	-0.3%	2.5%	3.1%	2.0%
Heat	0	0	0	0	0	1	2	n.s.	n.s.	13.5%	4.6%	9.1%	5.5%
Biomass & Other	6	8	9	9	9	7	5	1.9%	1.4%	0.2%	-0.3%	-1.8%	-3.6%
<b>Agriculture</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>1.8%</b>	<b>0.3%</b>	<b>4.3%</b>	<b>1.6%</b>	<b>1.6%</b>	<b>1.2%</b>
Coal	0	0	0	0	0	0	0	3.3%	-0.3%	23.1%	0.0%	0.0%	0.0%
Oil	1	1	1	1	2	2	2	2.1%	-1.2%	4.0%	1.6%	1.7%	1.2%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	1	1	1	1	1	0.8%	4.1%	0.6%	2.3%	2.4%	1.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>10</b>	<b>12</b>	<b>16</b>	<b>20</b>	<b>23</b>	<b>27</b>	<b>30</b>	<b>2.1%</b>	<b>2.8%</b>	<b>2.0%</b>	<b>1.5%</b>	<b>1.7%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	10	12	16	19	19	19	18	2.1%	3.0%	1.7%	-0.2%	0.2%	-0.4%
Gas	0	0	0	0	1	2	2	n.s.	n.s.	n.s.	17.6%	4.8%	2.5%
Electricity	0	0	0	0	2	4	5	2.9%	-4.1%	2.6%	17.7%	7.2%	3.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	3	4	n.s.	n.s.	n.s.	17.2%	7.2%	3.8%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>10</b>	<b>14</b>	<b>23</b>	<b>16</b>	<b>21</b>	<b>26</b>	<b>29</b>	<b>3.9%</b>	<b>5.1%</b>	<b>-3.4%</b>	<b>2.5%</b>	<b>2.1%</b>	<b>1.3%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Rest Sub Saharan Africa	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	475	625	825	1 084	1 393	1 749	2 138	2.8%	2.8%	2.8%	2.5%	2.3%	2.0%
GDP per capita (ppp, k\$'05)	1	1	1	2	3	4	6	-0.3%	3.6%	3.0%	3.8%	4.0%	4.0%
GDP per capita (mer, k\$'05)	1	0	1	1	1	2	3	-0.5%	3.5%	2.9%	3.8%	4.0%	4.0%
Share Value Added - Agriculture (%)	31	27	22	14	9	7	5	-1.5%	-1.7%	-4.5%	-4.4%	-3.2%	-2.2%
Share Value Added - Industry (%)	29	34	36	39	41	42	41	1.7%	0.7%	0.6%	0.6%	0.2%	-0.2%
Share Value Added - Services (%)	40	40	41	47	50	51	53	-0.2%	0.5%	1.4%	0.5%	0.3%	0.4%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	17	19	-6.5%	7.4%	-4.3%	1.2%	2.1%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	18	21	30	38	52	70	93	1.4%	3.8%	2.2%	3.3%	3.0%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	1 707	1 843	1 880	2 493	3 610	4 765	5 683	0.8%	0.2%	2.9%	3.8%	2.8%	1.8%
Total GHG (excl. sinks)	1 707	1 843	1 880	2 493	3 610	4 765	5 683	0.8%	0.2%	2.9%	3.8%	2.8%	1.8%
Total GHG (energy, industry, agriculture)	635	760	886	1 261	1 778	2 548	3 466	1.8%	1.5%	3.6%	3.5%	3.7%	3.1%
CO <sub>2</sub>	166	210	243	451	829	1 360	1 974	2.4%	1.5%	6.4%	6.3%	5.1%	3.8%
CH <sub>4</sub>	310	394	454	604	717	922	1 184	2.4%	1.4%	2.9%	1.7%	2.5%	2.5%
N <sub>2</sub> O	157	155	186	202	224	252	283	-0.2%	1.9%	0.8%	1.1%	1.2%	1.2%
F gases	2	2	2	4	7	14	25	-0.2%	3.7%	5.0%	6.3%	6.4%	6.0%
Total GHG from Energy and Industry	335	401	461	813	1 300	2 038	2 926	1.8%	1.4%	5.9%	4.8%	4.6%	3.7%
CO <sub>2</sub> Emissions from Fuel Comb.	105	132	194	360	625	1 004	1 447	2.3%	4.0%	6.4%	5.7%	4.9%	3.7%
Power generation/District heating	20	27	41	102	205	351	517	3.1%	4.1%	9.7%	7.2%	5.5%	3.9%
Industry	22	20	30	58	111	175	223	-1.1%	4.2%	6.8%	6.8%	4.6%	2.5%
Buildings	13	17	24	37	55	79	112	2.7%	3.4%	4.4%	4.1%	3.8%	3.5%
Agriculture	2	4	4	5	6	7	9	6.3%	0.3%	2.2%	1.7%	1.9%	2.0%
Transport	38	52	81	134	208	320	469	3.2%	4.5%	5.1%	4.5%	4.4%	3.9%
Other	9	11	14	24	41	71	117	2.1%	2.3%	5.5%	5.5%	5.8%	5.1%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	9.4%	0.1%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	9.3%	0.1%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	9.5%	0.0%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	9.5%	0.1%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	303	397	582	618	717	812	928	2.7%	3.9%	0.6%	1.5%	1.3%	1.3%
Coal	5	5	3	39	15	23	33	-0.9%	-3.6%	28.7%	-9.1%	4.5%	3.6%
Oil	146	190	283	303	307	314	332	2.7%	4.1%	0.7%	0.1%	0.2%	0.6%
Natural gas	4	12	46	58	92	112	130	11.5%	14.8%	2.4%	4.7%	2.0%	1.5%
Biomass	144	185	240	199	275	321	367	2.5%	2.6%	-1.9%	3.3%	1.5%	1.3%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	24.7%	18.9%
Hydro	4	5	8	9	10	12	14	3.1%	4.5%	1.0%	1.6%	1.5%	1.7%
Other renewables	0	0	1	10	18	30	52	3.0%	13.1%	22.3%	6.5%	5.3%	5.7%
Net Imports	- 120	- 160	- 261	- 201	- 169	- 106	- 24						
Coal	0	0	0	- 22	33	68	95						
Oil	- 120	- 156	- 229	- 221	- 191	- 152	- 105						
Natural gas	0	- 4	- 32	- 29	- 38	- 18	18						
Biomass	0	0	0	72	34	3	- 30						
Biofuels	0	0	0	- 2	- 7	- 6	- 4						
Electricity	0	0	0	1	1	1	1						
Primary Energy Demand <sup>2</sup>	183	236	321	417	548	706	904	2.6%	3.1%	2.6%	2.8%	2.6%	2.5%
Coal	5	4	4	17	48	91	129	-2.0%	-1.5%	17.2%	10.7%	6.7%	3.5%
Oil	26	34	54	82	116	162	227	2.8%	4.7%	4.3%	3.5%	3.4%	3.5%
Natural gas	4	8	14	29	54	94	147	7.2%	6.1%	7.7%	6.5%	5.7%	4.6%
Biomass	144	185	240	271	309	323	337	2.5%	2.6%	1.2%	1.3%	0.5%	0.4%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	24.7%	18.9%
Hydro	4	5	8	9	10	12	14	3.1%	4.5%	1.0%	1.6%	1.5%	1.7%
Other renewables	0	0	1	10	18	30	52	3.0%	13.1%	22.3%	6.5%	5.3%	5.7%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	183	236	321	417	548	706	904	2.6%	3.1%	2.6%	2.8%	2.6%	2.5%
Energy for Power Generation	11	15	24	53	93	151	236	3.5%	4.9%	8.1%	5.8%	5.0%	4.5%
Other Energy Transformation & Losses	3	4	6	12	28	45	74	2.4%	3.9%	6.8%	9.3%	4.8%	5.0%
Final consumption	174	223	301	372	466	579	718	2.6%	3.0%	2.1%	2.3%	2.2%	2.2%
Steel, Non-Met. Minerals and Chem.	2	1	1	3	9	15	17	-3.9%	0.1%	11.2%	10.1%	5.3%	1.5%
Other Industry	14	17	28	41	59	83	111	2.4%	5.0%	3.8%	3.7%	3.5%	3.0%
Non-Energy Use	1	1	2	3	6	12	20	0.8%	4.4%	6.5%	6.8%	6.2%	5.4%
Residential	136	174	226	251	275	287	289	2.5%	2.7%	1.1%	0.9%	0.4%	0.1%
Services	6	9	10	18	28	44	68	3.3%	1.6%	5.8%	4.6%	4.6%	4.4%
Agriculture	1	2	2	3	3	4	4	4.6%	1.0%	1.8%	1.3%	1.5%	1.7%
Road	12	18	30	50	82	128	194	4.0%	5.4%	5.2%	4.9%	4.6%	4.2%
Rail	0	0	0	0	0	0	0	-5.7%	-0.8%	2.9%	1.9%	2.4%	2.8%
Aviation	0	0	1	2	3	6	11	4.2%	7.8%	6.5%	7.2%	7.1%	6.7%
Other Transport	0	0	0	0	1	1	2	-1.1%	2.2%	5.5%	5.3%	5.0%	4.8%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest Sub Saharan Africa	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>7</b>	<b>9</b>	<b>15</b>	<b>34</b>	<b>64</b>	<b>109</b>	<b>169</b>	<b>3.8%</b>	<b>4.7%</b>	<b>8.7%</b>	<b>6.5%</b>	<b>5.4%</b>	<b>4.5%</b>
Coal	2	2	1	12	33	65	93	-1.2%	-3.1%	23.7%	10.9%	6.9%	3.6%
Oil	2	3	6	9	12	11	17	4.3%	5.9%	3.8%	2.7%	-0.3%	4.5%
Gas	2	4	7	12	15	24	39	7.1%	6.1%	5.6%	2.7%	4.6%	5.0%
Biomass & Waste	0	0	1	1	3	8	18	5.9%	5.0%	6.2%	11.3%	9.8%	9.3%
Other	0	0	0	1	1	1	1	2.9%	13.0%	21.6%	4.1%	0.6%	-0.7%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>66</b>	<b>90</b>	<b>148</b>	<b>266</b>	<b>487</b>	<b>878</b>	<b>1 479</b>	<b>3.1%</b>	<b>5.2%</b>	<b>6.0%</b>	<b>6.2%</b>	<b>6.1%</b>	<b>5.4%</b>
Coal	6	5	5	53	163	335	492	-1.5%	-1.4%	27.8%	11.9%	7.5%	3.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	8	12	20	39	50	49	77	3.9%	5.4%	6.6%	2.7%	-0.2%	4.6%
Gas	7	12	29	52	74	126	211	5.3%	8.9%	6.0%	3.6%	5.4%	5.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	1	1	3	13	35	91	6.4%	3.7%	9.8%	14.7%	10.9%	10.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	44	59	91	101	118	138	163	3.1%	4.5%	1.0%	1.6%	1.5%	1.7%
Wind	0	0	0	5	31	94	205	21.5%	8.6%	n.s.	19.8%	11.8%	8.1%
Solar	0	0	0	3	22	83	218	n.s.	32.1%	26.8%	23.0%	14.1%	10.1%
Other	0	0	1	10	16	18	22	2.9%	13.0%	21.6%	4.2%	1.3%	2.0%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>23</b>	<b>27</b>	<b>41</b>	<b>71</b>	<b>124</b>	<b>237</b>	<b>425</b>	<b>1.6%</b>	<b>4.2%</b>	<b>5.6%</b>	<b>5.7%</b>	<b>6.7%</b>	<b>6.0%</b>
Coal	2	2	2	8	24	51	76	-0.4%	1.3%	14.1%	12.2%	7.9%	4.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	4	5	8	22	31	36	42	1.1%	5.1%	10.6%	3.6%	1.7%	1.3%
Gas	3	6	11	14	14	25	43	8.1%	6.6%	3.0%	0.0%	5.6%	5.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	2	5	13	1.0%	5.9%	4.4%	14.3%	11.0%	10.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	15	15	20	22	26	30	36	0.3%	3.0%	1.0%	1.6%	1.5%	1.7%
Wind	0	0	0	2	13	39	84	n.s.	13.0%	n.s.	19.6%	11.7%	8.0%
Solar	0	0	0	2	13	49	129	n.s.	29.7%	28.3%	23.2%	14.0%	10.1%
Other	0	0	0	1	2	2	3	4.1%	12.0%	20.1%	3.7%	1.9%	3.1%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>174</b>	<b>223</b>	<b>301</b>	<b>372</b>	<b>466</b>	<b>579</b>	<b>718</b>	<b>2.6%</b>	<b>3.0%</b>	<b>2.1%</b>	<b>2.3%</b>	<b>2.2%</b>	<b>2.2%</b>
Coal	3	2	2	5	13	23	29	-2.5%	0.3%	9.7%	9.7%	5.5%	2.4%
Oil	21	29	46	71	102	147	206	2.9%	4.8%	4.5%	3.7%	3.8%	3.4%
Gas	1	2	4	10	26	48	74	5.3%	6.1%	11.0%	9.9%	6.4%	4.5%
Electricity	4	6	10	19	35	62	105	3.4%	5.6%	6.2%	6.2%	6.1%	5.4%
Heat	0	0	0	0	0	1	3	n.s.	n.s.	18.7%	31.6%	17.3%	14.1%
Biomass & Other	144	185	240	267	290	298	300	2.5%	2.6%	1.1%	0.8%	0.3%	0.1%
Share of Renewables <sup>3</sup> (%)	84%	84%	81%	73%	65%	56%	50%	0.0%	-0.3%	-1.0%	-1.2%	-1.4%	-1.1%
<b>Industry (incl. non-energy use)</b>	<b>16</b>	<b>20</b>	<b>31</b>	<b>47</b>	<b>74</b>	<b>109</b>	<b>148</b>	<b>1.7%</b>	<b>4.7%</b>	<b>4.3%</b>	<b>4.5%</b>	<b>4.0%</b>	<b>3.1%</b>
Coal	2	1	1	4	12	22	28	-3.4%	-1.2%	13.4%	11.1%	5.8%	2.5%
Oil	5	4	6	9	12	15	19	-0.3%	3.9%	3.6%	2.7%	2.6%	2.1%
Gas	1	1	4	7	15	25	35	2.3%	9.2%	7.8%	7.1%	5.3%	3.3%
Electricity	2	3	4	8	15	27	43	2.1%	4.2%	7.2%	6.1%	5.6%	4.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	7	10	16	18	19	20	23	3.9%	5.1%	1.4%	0.7%	0.5%	1.5%
<b>Buildings</b>	<b>143</b>	<b>183</b>	<b>236</b>	<b>269</b>	<b>303</b>	<b>331</b>	<b>357</b>	<b>2.5%</b>	<b>2.6%</b>	<b>1.3%</b>	<b>1.2%</b>	<b>0.9%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	0	0	-2.8%	6.1%	1.8%	-0.3%	-0.6%	-0.9%
Oil	4	5	7	9	10	11	14	2.4%	4.0%	2.8%	0.9%	1.3%	1.8%
Gas	0	0	0	2	9	18	29	n.s.	n.s.	n.s.	14.1%	7.1%	4.9%
Electricity	2	3	6	10	17	30	50	4.9%	7.0%	5.5%	5.4%	5.6%	5.3%
Heat	0	0	0	0	0	1	3	n.s.	n.s.	18.7%	31.6%	17.3%	14.1%
Biomass & Other	137	174	223	247	266	270	261	2.4%	2.5%	1.0%	0.7%	0.2%	-0.4%
<b>Agriculture</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>4.6%</b>	<b>1.0%</b>	<b>1.8%</b>	<b>1.3%</b>	<b>1.5%</b>	<b>1.7%</b>
Coal	0	0	0	0	0	0	0	6.1%	0.7%	0.4%	0.0%	0.0%	0.0%
Oil	0	1	1	1	1	2	2	6.4%	0.0%	3.3%	2.6%	2.6%	2.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	1	2.9%	-0.7%	4.4%	3.3%	3.3%	3.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	1	1	1	1	1	1	3.2%	2.1%	0.7%	0.0%	0.0%	0.0%
<b>Transport</b>	<b>13</b>	<b>19</b>	<b>32</b>	<b>53</b>	<b>86</b>	<b>136</b>	<b>208</b>	<b>3.8%</b>	<b>5.3%</b>	<b>5.2%</b>	<b>5.0%</b>	<b>4.7%</b>	<b>4.4%</b>
Coal	0	0	0	0	0	0	0	-21.2%	1.4%	0.3%	0.0%	0.0%	0.0%
Oil	13	19	31	52	79	119	171	3.9%	5.3%	5.1%	4.3%	4.2%	3.7%
Gas	0	0	0	0	2	5	11	n.s.	n.s.	n.s.	26.7%	10.5%	7.7%
Electricity	0	0	0	0	2	5	11	n.s.	4.7%	33.4%	43.3%	13.3%	8.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	4	7	15	n.s.	n.s.	n.s.	21.4%	6.2%	8.6%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>12</b>	<b>28</b>	<b>45</b>	<b>74</b>	<b>2.4%</b>	<b>3.9%</b>	<b>6.8%</b>	<b>9.3%</b>	<b>4.8%</b>	<b>5.0%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Iran	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	56	66	74	83	89	91	92	1.6%	1.2%	1.2%	0.6%	0.3%	0.1%
GDP per capita (ppp, k\$'05)	6	7	11	11	17	24	31	2.1%	4.0%	0.4%	3.7%	3.7%	2.7%
GDP per capita (mer, k\$'05)	2	2	3	3	5	7	9	2.1%	3.8%	0.4%	3.7%	3.7%	2.7%
Share Value Added - Agriculture (%)	9	6	1	1	1	0	0	-5.1%	-15.7%	-5.4%	-1.3%	-0.9%	-0.5%
Share Value Added - Industry (%)	42	49	50	48	46	43	40	1.5%	0.1%	-0.3%	-0.5%	-0.7%	-0.7%
Share Value Added - Services (%)	48	45	49	51	54	57	60	-0.7%	0.9%	0.4%	0.4%	0.6%	0.5%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	23	26	-7.8%	10.3%	-2.2%	1.8%	1.8%	1.2%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	28	24	47	43	48	69	93	-1.2%	6.8%	-1.0%	1.1%	3.7%	3.1%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
<b>Total GHG</b>	<b>299</b>	<b>472</b>	<b>706</b>	<b>948</b>	<b>1 234</b>	<b>1 561</b>	<b>1 771</b>	<b>4.7%</b>	<b>4.1%</b>	<b>3.0%</b>	<b>2.7%</b>	<b>2.4%</b>	<b>1.3%</b>
<b>Total GHG (excl. sinks)</b>	<b>299</b>	<b>472</b>	<b>709</b>	<b>950</b>	<b>1 239</b>	<b>1 562</b>	<b>1 781</b>	<b>4.6%</b>	<b>4.2%</b>	<b>3.0%</b>	<b>2.7%</b>	<b>2.3%</b>	<b>1.3%</b>
<b>Total GHG (energy, industry, agriculture)</b>	<b>299</b>	<b>472</b>	<b>709</b>	<b>950</b>	<b>1 239</b>	<b>1 559</b>	<b>1 781</b>	<b>4.6%</b>	<b>4.2%</b>	<b>3.0%</b>	<b>2.7%</b>	<b>2.3%</b>	<b>1.3%</b>
CO <sub>2</sub>	221	367	568	789	1 062	1 354	1 556	5.2%	4.5%	3.3%	3.0%	2.5%	1.4%
CH <sub>4</sub>	57	80	115	129	139	161	178	3.5%	3.8%	1.1%	0.7%	1.5%	1.0%
N <sub>2</sub> O	19	23	23	29	35	39	42	1.6%	0.2%	2.4%	1.7%	1.3%	0.7%
F gases	3	2	2	2	3	4	5	-1.5%	-1.6%	2.3%	3.4%	2.6%	1.6%
<b>Total GHG from Energy and Industry</b>	<b>267</b>	<b>433</b>	<b>668</b>	<b>898</b>	<b>1 182</b>	<b>1 498</b>	<b>1 717</b>	<b>5.0%</b>	<b>4.4%</b>	<b>3.0%</b>	<b>2.8%</b>	<b>2.4%</b>	<b>1.4%</b>
<b>CO<sub>2</sub> Emissions from Fuel Comb.</b>	<b>191</b>	<b>332</b>	<b>512</b>	<b>720</b>	<b>970</b>	<b>1 243</b>	<b>1 437</b>	<b>5.7%</b>	<b>4.4%</b>	<b>3.5%</b>	<b>3.0%</b>	<b>2.5%</b>	<b>1.5%</b>
Power generation/District heating	36	69	131	188	308	449	572	6.8%	6.6%	3.7%	5.1%	3.8%	2.4%
Industry	43	50	98	156	234	314	363	1.4%	6.9%	4.8%	4.1%	3.0%	1.4%
Buildings	42	91	121	133	138	140	139	8.1%	2.8%	1.0%	0.3%	0.1%	-0.1%
Agriculture	12	11	13	13	15	17	19	-0.8%	1.8%	-0.3%	1.4%	1.4%	1.0%
Transport	39	75	99	147	166	182	181	6.6%	2.9%	4.0%	1.2%	0.9%	0.0%
Other	18	36	50	82	109	141	164	6.9%	3.4%	5.2%	2.9%	2.6%	1.5%
<b>CO<sub>2</sub> captured (CCS)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>3.2%</b>	<b>7.9%</b>	<b>0.5%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	3.3%	8.0%	0.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	3.1%	7.5%	0.4%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	3.1%	7.9%	0.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
<b>Primary Production</b>	<b>184</b>	<b>240</b>	<b>343</b>	<b>444</b>	<b>637</b>	<b>858</b>	<b>940</b>	<b>2.7%</b>	<b>3.6%</b>	<b>2.6%</b>	<b>3.7%</b>	<b>3.0%</b>	<b>0.9%</b>
Coal	1	1	1	1	1	2	2	3.5%	-0.6%	2.7%	3.2%	2.1%	0.2%
Oil	161	190	215	229	257	332	410	1.7%	1.2%	0.6%	1.2%	2.6%	2.1%
Natural gas	22	49	126	209	373	517	521	8.5%	9.9%	5.2%	5.9%	3.3%	0.1%
Biomass	0	0	1	2	3	3	3	-1.8%	16.4%	12.4%	3.2%	1.3%	-0.2%
Nuclear <sup>1</sup>	0	0	0	1	1	1	1	n.s.	n.s.	n.s.	0.0%	0.0%	0.0%
Hydro	1	0	1	1	1	1	1	-5.0%	10.1%	4.4%	0.6%	0.4%	0.5%
Other renewables	0	0	0	0	0	0	1	n.s.	19.8%	8.3%	13.2%	11.2%	9.3%
<b>Net Imports</b>	<b>- 114</b>	<b>- 117</b>	<b>- 135</b>	<b>- 142</b>	<b>- 225</b>	<b>- 332</b>	<b>- 336</b>						
Coal	0	1	1	3	7	10	11						
Oil	- 110	- 121	- 132	- 112	- 106	- 138	- 193						
Natural gas	- 4	3	- 4	- 32	- 125	- 204	- 154						
Biomass	0	0	0	0	0	0	1						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	- 1	- 1	- 1	- 1						
<b>Primary Energy Demand<sup>2</sup></b>	<b>70</b>	<b>124</b>	<b>208</b>	<b>302</b>	<b>411</b>	<b>525</b>	<b>604</b>	<b>5.8%</b>	<b>5.3%</b>	<b>3.8%</b>	<b>3.1%</b>	<b>2.5%</b>	<b>1.4%</b>
Coal	1	2	2	4	8	12	13	9.9%	0.8%	5.3%	8.6%	3.6%	0.7%
Oil	51	69	82	117	151	194	217	3.0%	1.8%	3.6%	2.6%	2.6%	1.1%
Natural gas	17	53	122	178	248	313	367	11.7%	8.8%	3.8%	3.4%	2.4%	1.6%
Biomass	0	0	1	1	3	3	4	-1.8%	16.4%	9.3%	5.8%	2.8%	0.7%
Nuclear <sup>1</sup>	0	0	0	1	1	1	1	n.s.	n.s.	n.s.	0.0%	0.0%	0.0%
Hydro	1	0	1	1	1	1	1	-5.0%	10.1%	4.4%	0.6%	0.4%	0.5%
Other renewables	0	0	0	0	0	0	1	n.s.	19.8%	8.3%	13.2%	11.2%	9.3%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
<b>Primary Energy Demand</b>	<b>70</b>	<b>124</b>	<b>208</b>	<b>302</b>	<b>411</b>	<b>525</b>	<b>604</b>	<b>5.8%</b>	<b>5.3%</b>	<b>3.8%</b>	<b>3.1%</b>	<b>2.5%</b>	<b>1.4%</b>
<b>Energy for Power Generation</b>	<b>14</b>	<b>27</b>	<b>52</b>	<b>75</b>	<b>123</b>	<b>178</b>	<b>226</b>	<b>7.2%</b>	<b>6.8%</b>	<b>3.8%</b>	<b>5.0%</b>	<b>3.7%</b>	<b>2.5%</b>
<b>Other Energy Transformation &amp; Losses</b>	<b>6</b>	<b>11</b>	<b>16</b>	<b>30</b>	<b>43</b>	<b>56</b>	<b>64</b>	<b>5.3%</b>	<b>3.9%</b>	<b>6.6%</b>	<b>3.6%</b>	<b>2.7%</b>	<b>1.4%</b>
<b>Final consumption</b>	<b>54</b>	<b>94</b>	<b>156</b>	<b>222</b>	<b>291</b>	<b>361</b>	<b>405</b>	<b>5.6%</b>	<b>5.2%</b>	<b>3.6%</b>	<b>2.7%</b>	<b>2.2%</b>	<b>1.2%</b>
Steel, Non-Met. Minerals and Chem.	1	3	9	14	25	34	37	17.6%	12.0%	4.6%	5.8%	3.0%	0.7%
Other Industry	14	16	30	47	66	86	101	1.7%	6.4%	4.7%	3.3%	2.7%	1.6%
Non-Energy Use	6	8	14	24	39	55	66	1.9%	6.0%	5.9%	4.9%	3.6%	1.8%
Residential	12	29	46	58	66	73	78	9.0%	4.7%	2.2%	1.3%	1.0%	0.7%
Services	4	9	11	13	17	23	28	7.4%	2.4%	1.3%	3.0%	2.8%	2.0%
Agriculture	4	4	6	8	10	12	14	0.4%	4.0%	2.2%	1.9%	1.9%	1.6%
Road	13	24	39	58	68	78	82	6.3%	5.0%	4.0%	1.7%	1.4%	0.5%
Rail	0	0	0	0	0	0	0	n.s.	36.8%	6.1%	3.1%	2.8%	1.9%
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other Transport	0	1	0	0	0	0	0	n.s.	-30.1%	2.8%	3.2%	2.4%	1.4%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Iran	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>13</b>	<b>27</b>	<b>51</b>	<b>73</b>	<b>120</b>	<b>174</b>	<b>222</b>	<b>7.5%</b>	<b>6.7%</b>	<b>3.6%</b>	<b>5.2%</b>	<b>3.8%</b>	<b>2.5%</b>
Coal	0	0	0	1	1	2	4	22.3%	-3.1%	18.2%	5.2%	9.0%	6.7%
Oil	6	7	13	21	32	47	57	1.5%	6.1%	4.8%	4.2%	4.1%	1.8%
Gas	7	19	38	51	88	124	161	11.2%	7.0%	3.0%	5.5%	3.6%	2.6%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	10.0%	33.3%	13.3%	6.5%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>59</b>	<b>121</b>	<b>233</b>	<b>363</b>	<b>620</b>	<b>928</b>	<b>1 217</b>	<b>7.5%</b>	<b>6.7%</b>	<b>4.5%</b>	<b>5.5%</b>	<b>4.1%</b>	<b>2.8%</b>
Coal	0	0	0	2	4	12	23	22.2%	-3.1%	19.2%	7.8%	10.3%	7.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	22	25	46	88	135	208	254	1.5%	6.1%	6.7%	4.4%	4.4%	2.0%
Gas	31	92	177	253	457	679	901	11.5%	6.8%	3.6%	6.1%	4.0%	2.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	1	2	5	n.s.	n.s.	11.6%	35.5%	13.9%	7.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	6	6	6	6	n.s.	n.s.	n.s.	0.0%	0.0%	0.0%
Hydro	6	4	10	15	16	16	17	-5.0%	10.1%	4.4%	0.6%	0.4%	0.5%
Wind	0	0	0	0	1	4	9	n.s.	18.5%	6.0%	13.2%	11.2%	9.7%
Solar	0	0	0	0	0	1	3	n.s.	n.s.	19.7%	13.1%	10.0%	8.5%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.6%	12.8%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>18</b>	<b>34</b>	<b>61</b>	<b>79</b>	<b>113</b>	<b>162</b>	<b>207</b>	<b>6.5%</b>	<b>6.2%</b>	<b>2.6%</b>	<b>3.7%</b>	<b>3.6%</b>	<b>2.5%</b>
Coal	0	0	0	0	1	2	3	22.2%	-3.2%	2.6%	7.8%	10.4%	7.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	6	8	13	16	23	36	42	3.5%	4.1%	2.6%	3.6%	4.5%	1.3%
Gas	10	23	40	51	76	108	143	8.6%	5.8%	2.4%	4.2%	3.6%	2.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	0	1	n.s.	n.s.	-2.4%	35.6%	14.0%	7.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	1	1	1	1	n.s.	n.s.	n.s.	-0.2%	-0.2%	-0.2%
Hydro	2	2	8	11	11	12	12	0.2%	15.6%	2.4%	0.6%	0.4%	0.5%
Wind	0	0	0	0	1	1	4	n.s.	n.s.	5.4%	12.5%	10.9%	9.5%
Solar	0	0	0	0	0	1	2	n.s.	n.s.	19.6%	12.9%	9.8%	8.3%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	12.2%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>54</b>	<b>94</b>	<b>156</b>	<b>222</b>	<b>291</b>	<b>361</b>	<b>405</b>	<b>5.6%</b>	<b>5.2%</b>	<b>3.6%</b>	<b>2.7%</b>	<b>2.2%</b>	<b>1.2%</b>
Coal	0	1	1	1	4	5	5	7.4%	-0.8%	6.4%	10.0%	3.1%	-0.9%
Oil	40	56	63	82	102	125	136	3.3%	1.3%	2.7%	2.2%	2.0%	0.8%
Gas	9	29	75	109	136	157	169	12.0%	10.0%	3.8%	2.2%	1.5%	0.7%
Electricity	4	8	16	26	44	67	88	6.7%	7.0%	5.0%	5.5%	4.1%	2.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	3.0%
Biomass & Other	0	0	1	4	5	6	8	-1.8%	16.3%	19.8%	2.7%	2.3%	2.0%
Share of Renewables <sup>3</sup> (%)	1%	1%	1%	1%	1%	1%	2%	-9.6%	6.9%	2.6%	1.0%	0.4%	1.0%
<b>Industry (incl. non-energy use)</b>	<b>21</b>	<b>27</b>	<b>53</b>	<b>86</b>	<b>130</b>	<b>175</b>	<b>204</b>	<b>2.7%</b>	<b>7.1%</b>	<b>5.0%</b>	<b>4.2%</b>	<b>3.0%</b>	<b>1.5%</b>
Coal	0	1	1	1	4	5	5	7.2%	-0.7%	6.5%	10.0%	3.1%	-0.9%
Oil	12	12	16	18	31	50	63	0.3%	2.6%	1.2%	5.7%	4.7%	2.4%
Gas	7	11	31	57	80	99	109	4.6%	11.2%	6.4%	3.5%	2.2%	0.9%
Electricity	1	3	5	9	14	21	27	8.6%	6.7%	5.2%	4.7%	3.8%	2.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	5.6%	1.8%	-1.2%
<b>Buildings</b>	<b>17</b>	<b>38</b>	<b>58</b>	<b>71</b>	<b>83</b>	<b>96</b>	<b>105</b>	<b>8.6%</b>	<b>4.2%</b>	<b>2.1%</b>	<b>1.6%</b>	<b>1.4%</b>	<b>1.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	-7.3%	-1.4%	-2.3%	-2.6%	-2.9%
Oil	11	15	9	7	8	9	10	3.0%	-5.1%	-1.8%	0.1%	1.4%	1.0%
Gas	3	19	40	47	49	48	46	21.7%	7.9%	1.7%	0.4%	-0.1%	-0.4%
Electricity	3	5	8	13	23	35	46	5.3%	6.5%	4.5%	5.8%	4.3%	2.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	3.0%
Biomass & Other	0	0	1	3	4	4	3	-1.8%	16.3%	18.6%	0.9%	-0.2%	-0.7%
<b>Agriculture</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>12</b>	<b>14</b>	<b>0.4%</b>	<b>4.0%</b>	<b>2.2%</b>	<b>1.9%</b>	<b>1.9%</b>	<b>1.6%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	4	4	4	4	4	5	5	-0.8%	1.1%	-1.1%	1.4%	1.4%	1.0%
Gas	0	0	0	1	1	1	1	n.s.	n.s.	7.1%	1.4%	1.4%	1.0%
Electricity	0	1	2	4	5	6	7	9.4%	10.2%	5.7%	2.5%	2.4%	2.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>13</b>	<b>25</b>	<b>39</b>	<b>58</b>	<b>69</b>	<b>79</b>	<b>82</b>	<b>6.6%</b>	<b>4.8%</b>	<b>4.0%</b>	<b>1.7%</b>	<b>1.4%</b>	<b>0.5%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	13	25	34	53	59	62	59	6.6%	3.4%	4.5%	1.1%	0.5%	-0.6%
Gas	0	0	5	4	6	9	13	n.s.	n.s.	-0.6%	3.1%	4.4%	3.4%
Electricity	0	0	0	0	3	5	7	n.s.	36.8%	20.5%	31.4%	7.0%	3.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	2	4	n.s.	n.s.	n.s.	26.7%	10.7%	6.4%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>6</b>	<b>11</b>	<b>16</b>	<b>30</b>	<b>43</b>	<b>56</b>	<b>64</b>	<b>5.3%</b>	<b>3.9%</b>	<b>6.6%</b>	<b>3.6%</b>	<b>2.7%</b>	<b>1.4%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Saudi Arabia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	16	21	28	34	39	43	46	2.7%	2.8%	2.0%	1.3%	1.0%	0.7%
GDP per capita (ppp, k\$'05)	19	19	24	27	31	37	41	0.0%	2.5%	1.2%	1.4%	1.7%	1.1%
GDP per capita (mer, k\$'05)	12	12	15	17	20	24	26	0.0%	2.3%	1.4%	1.4%	1.7%	1.1%
Share Value Added - Agriculture (%)	9	6	1	1	1	1	1	-5.1%	-15.7%	-5.4%	-0.2%	-0.2%	-0.1%
Share Value Added - Industry (%)	42	49	50	50	48	46	44	1.5%	0.1%	0.2%	-0.4%	-0.6%	-0.4%
Share Value Added - Services (%)	48	45	49	49	51	54	56	-0.7%	0.9%	-0.1%	0.4%	0.5%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	23	26	-7.8%	10.3%	-2.2%	1.8%	1.8%	1.2%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	28	24	47	43	48	69	93	-1.2%	6.8%	-1.0%	1.1%	3.7%	3.1%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	213	324	551	729	788	902	956	4.3%	5.5%	2.8%	0.8%	1.4%	0.6%
Total GHG (excl. sinks)	213	324	551	729	788	903	957	4.3%	5.5%	2.8%	0.8%	1.4%	0.6%
Total GHG (energy, industry, agriculture)	213	324	551	729	788	901	957	4.3%	5.5%	2.8%	0.8%	1.3%	0.6%
CO <sub>2</sub>	174	274	483	629	686	784	837	4.7%	5.8%	2.7%	0.9%	1.3%	0.7%
CH <sub>4</sub>	31	43	60	90	91	105	109	3.5%	3.4%	4.1%	0.1%	1.4%	0.3%
N <sub>2</sub> O	6	6	8	10	10	11	11	0.2%	1.6%	2.3%	0.5%	0.7%	0.1%
F gases	2	0	0	0	0	0	0	-26.3%	11.7%	0.2%	0.1%	0.1%	0.0%
Total GHG from Energy and Industry	208	319	547	723	782	894	951	4.4%	5.5%	2.8%	0.8%	1.4%	0.6%
CO <sub>2</sub> Emissions from Fuel Comb.	158	248	434	560	604	688	734	4.6%	5.8%	2.6%	0.7%	1.3%	0.6%
Power generation/District heating	58	103	180	212	211	236	261	5.9%	5.7%	1.7%	0.0%	1.1%	1.0%
Industry	30	57	113	155	177	203	214	6.7%	7.2%	3.2%	1.3%	1.4%	0.5%
Buildings	3	4	5	8	13	20	24	2.9%	2.0%	5.1%	5.4%	4.4%	2.2%
Agriculture	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Transport	49	61	107	156	170	191	192	2.1%	5.8%	3.9%	0.9%	1.2%	0.1%
Other	18	23	30	29	33	39	43	2.5%	2.4%	-0.1%	1.0%	1.7%	1.1%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	13.9%	3.5%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	14.1%	3.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	13.3%	3.3%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	14.0%	3.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	378	508	570	846	945	1 139	1 214	3.0%	1.1%	4.0%	1.1%	1.9%	0.6%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	350	467	497	746	775	872	914	2.9%	0.6%	4.2%	0.4%	1.2%	0.5%
Natural gas	28	41	73	99	170	266	298	4.0%	5.9%	3.2%	5.5%	4.6%	1.2%
Biomass	0	0	0	1	1	1	1	-9.3%	2.9%	57.1%	4.2%	2.3%	1.2%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other renewables	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	19.7%	13.4%	7.7%
Net Imports	- 316	- 409	- 383	- 605	- 678	- 828	- 878						
Coal	0	0	0	0	1	3	4						
Oil	- 308	- 399	- 370	- 603	- 636	- 727	- 774						
Natural gas	- 8	- 10	- 13	- 2	- 43	- 103	- 108						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	62	99	187	241	267	311	336	4.8%	6.5%	2.6%	1.0%	1.5%	0.8%
Coal	0	0	0	0	1	3	4	n.s.	n.s.	n.s.	12.2%	8.2%	5.2%
Oil	43	68	127	143	139	144	139	4.8%	6.4%	1.2%	-0.3%	0.4%	-0.4%
Natural gas	19	31	60	97	126	162	190	4.7%	6.9%	4.9%	2.7%	2.5%	1.6%
Biomass	0	0	0	0	1	1	1	-9.5%	2.9%	54.4%	5.5%	3.0%	1.8%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other renewables	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	19.7%	13.4%	7.7%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	62	99	187	241	267	311	336	4.8%	6.5%	2.6%	1.0%	1.5%	0.8%
Energy for Power Generation	22	37	65	81	83	95	106	5.6%	5.7%	2.2%	0.3%	1.3%	1.2%
Other Energy Transformation & Losses	6	7	20	15	17	20	22	1.8%	10.5%	-2.3%	0.9%	1.4%	1.0%
Final consumption	39	63	120	169	196	232	250	4.9%	6.6%	3.5%	1.5%	1.7%	0.8%
Steel, Non-Met. Minerals and Chem.	0	0	1	2	2	3	3	n.s.	n.s.	3.9%	1.3%	1.6%	1.0%
Other Industry	6	11	19	28	32	38	42	6.6%	5.8%	3.8%	1.4%	1.8%	1.0%
Non-Energy Use	12	23	48	65	77	90	96	6.6%	7.4%	3.1%	1.7%	1.6%	0.6%
Residential	3	6	11	14	16	20	23	5.9%	6.0%	2.9%	1.3%	2.2%	1.4%
Services	1	2	5	8	10	14	16	5.3%	8.2%	4.1%	2.4%	3.0%	1.9%
Agriculture	0	0	0	0	1	1	1	9.2%	4.8%	3.2%	2.1%	2.0%	1.7%
Road	16	19	34	50	56	65	68	2.2%	5.8%	3.9%	1.2%	1.5%	0.4%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Aviation	1	1	1	1	1	1	1	2.0%	1.0%	3.0%	-0.3%	0.2%	-0.2%
Other Transport	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Saudi Arabia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>22</b>	<b>37</b>	<b>65</b>	<b>81</b>	<b>83</b>	<b>94</b>	<b>105</b>	<b>5.6%</b>	<b>5.7%</b>	<b>2.2%</b>	<b>0.2%</b>	<b>1.3%</b>	<b>1.1%</b>
Coal	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	12.1%	9.0%	5.9%
Oil	9	19	35	28	21	17	13	7.7%	6.0%	-2.0%	-3.0%	-2.0%	-2.4%
Gas	12	18	30	52	61	75	89	3.7%	5.3%	5.6%	1.6%	2.1%	1.7%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	19.4%	8.5%	3.6%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>69</b>	<b>126</b>	<b>240</b>	<b>351</b>	<b>391</b>	<b>475</b>	<b>562</b>	<b>6.2%</b>	<b>6.6%</b>	<b>3.9%</b>	<b>1.1%</b>	<b>2.0%</b>	<b>1.7%</b>
Coal	0	0	0	1	3	8	15	n.s.	n.s.	n.s.	12.5%	9.3%	6.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	34	68	129	117	88	73	58	7.2%	6.6%	-1.0%	-2.8%	-1.9%	-2.2%
Gas	35	58	111	233	298	390	480	5.1%	6.7%	7.7%	2.5%	2.7%	2.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	20.4%	9.0%	4.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Wind	0	0	0	0	1	2	4	n.s.	n.s.	n.s.	15.8%	12.3%	8.2%
Solar	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	21.6%	12.8%	9.0%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	15.2%	22.6%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>24</b>	<b>31</b>	<b>60</b>	<b>85</b>	<b>84</b>	<b>92</b>	<b>110</b>	<b>2.6%</b>	<b>6.8%</b>	<b>3.6%</b>	<b>-0.1%</b>	<b>0.9%</b>	<b>1.8%</b>
Coal	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	12.6%	9.5%	6.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	13	18	33	39	30	22	23	3.2%	6.4%	1.7%	-2.7%	-2.8%	0.1%
Gas	11	13	27	46	53	67	82	1.9%	7.2%	5.4%	1.5%	2.3%	2.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	20.5%	9.1%	4.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	0.4%	0.5%
Wind	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	15.6%	12.1%	8.1%
Solar	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	21.6%	12.7%	9.0%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>39</b>	<b>63</b>	<b>120</b>	<b>169</b>	<b>196</b>	<b>232</b>	<b>250</b>	<b>4.9%</b>	<b>6.6%</b>	<b>3.5%</b>	<b>1.5%</b>	<b>1.7%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	12.1%	6.4%	3.1%
Oil	28	43	75	104	107	116	115	4.3%	5.7%	3.3%	0.3%	0.8%	-0.1%
Gas	6	12	27	41	60	79	92	6.4%	9.0%	4.0%	3.9%	2.9%	1.4%
Electricity	5	9	17	24	28	35	41	6.1%	7.4%	3.2%	1.5%	2.3%	1.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.3%	4.3%
Biomass & Other	0	0	0	0	1	1	2	-9.6%	2.9%	52.6%	5.9%	5.2%	4.7%
Share of Renewables <sup>3</sup> (%)	0%	0%	0%	0%	0%	1%	1%	n.s.	n.s.	n.s.	2.9%	3.1%	3.9%
<b>Industry (incl. non-energy use)</b>	<b>18</b>	<b>34</b>	<b>69</b>	<b>95</b>	<b>111</b>	<b>131</b>	<b>141</b>	<b>6.6%</b>	<b>7.2%</b>	<b>3.3%</b>	<b>1.6%</b>	<b>1.7%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	12.1%	6.4%	3.1%
Oil	11	22	39	51	52	55	55	6.9%	6.0%	2.8%	0.1%	0.7%	0.0%
Gas	6	12	27	40	54	69	77	6.4%	9.0%	3.8%	3.2%	2.4%	1.2%
Electricity	1	1	2	4	5	6	7	4.2%	8.7%	4.6%	2.1%	2.3%	1.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	0.1%	-2.6%	-2.9%
<b>Buildings</b>	<b>5</b>	<b>8</b>	<b>16</b>	<b>22</b>	<b>26</b>	<b>34</b>	<b>40</b>	<b>5.7%</b>	<b>6.7%</b>	<b>3.3%</b>	<b>1.7%</b>	<b>2.5%</b>	<b>1.6%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	1	2	2	2	2	2.9%	2.0%	1.7%	-1.1%	0.6%	0.1%
Gas	0	0	0	1	3	6	8	n.s.	n.s.	n.s.	14.2%	6.2%	2.8%
Electricity	4	7	15	20	21	26	29	6.3%	7.3%	2.9%	0.8%	1.9%	1.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.3%	4.3%
Biomass & Other	0	0	0	0	0	0	0	-9.6%	2.9%	36.9%	7.3%	3.4%	1.8%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>9.2%</b>	<b>4.8%</b>	<b>3.2%</b>	<b>2.1%</b>	<b>2.0%</b>	<b>1.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	1	1	1	9.2%	4.8%	3.2%	2.1%	2.0%	1.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>16</b>	<b>20</b>	<b>35</b>	<b>51</b>	<b>57</b>	<b>66</b>	<b>69</b>	<b>2.2%</b>	<b>5.6%</b>	<b>3.9%</b>	<b>1.2%</b>	<b>1.5%</b>	<b>0.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	16	20	35	51	54	59	58	2.2%	5.6%	3.9%	0.6%	0.9%	-0.2%
Gas	0	0	0	0	2	4	6	n.s.	n.s.	n.s.	29.7%	7.1%	3.6%
Electricity	0	0	0	0	1	3	4	n.s.	n.s.	n.s.	38.8%	7.8%	4.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	34.2%	12.8%	7.7%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>6</b>	<b>7</b>	<b>20</b>	<b>15</b>	<b>17</b>	<b>20</b>	<b>22</b>	<b>1.8%</b>	<b>10.5%</b>	<b>-2.3%</b>	<b>0.9%</b>	<b>1.4%</b>	<b>1.0%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Turkey	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	54	63	72	82	88	93	96	1.6%	1.3%	1.3%	0.6%	0.6%	0.3%
GDP per capita (ppp, k\$'05)	8	10	13	16	21	27	31	2.0%	2.5%	2.5%	2.8%	2.2%	1.6%
GDP per capita (mer, k\$'05)	5	6	8	10	13	17	19	2.0%	2.5%	2.6%	2.8%	2.2%	1.6%
Share Value Added - Agriculture (%)	18	11	10	9	8	8	7	-4.6%	-1.6%	-1.2%	-0.7%	-0.5%	-0.3%
Share Value Added - Industry (%)	32	31	27	26	25	24	23	-0.2%	-1.5%	-0.2%	-0.5%	-0.5%	-0.4%
Share Value Added - Services (%)	50	57	63	65	67	69	70	1.4%	1.0%	0.3%	0.3%	0.2%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	17	19	-6.5%	7.4%	-4.3%	1.2%	2.1%	1.3%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	18	21	30	38	52	70	93	1.4%	3.8%	2.2%	3.3%	3.0%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	141	242	315	434	550	637	698	5.6%	2.7%	3.2%	2.4%	1.5%	0.9%
Total GHG (excl. sinks)	185	292	373	477	589	677	745	4.7%	2.5%	2.5%	2.1%	1.4%	1.0%
Total GHG (energy, industry, agriculture)	185	292	373	477	585	677	745	4.7%	2.5%	2.5%	2.1%	1.5%	1.0%
CO <sub>2</sub>	138	220	297	389	491	578	642	4.8%	3.1%	2.7%	2.4%	1.6%	1.0%
CH <sub>4</sub>	34	53	57	65	68	71	72	4.7%	0.7%	1.3%	0.4%	0.4%	0.2%
N <sub>2</sub> O	12	17	14	17	19	21	24	3.4%	-1.9%	1.6%	1.3%	1.1%	1.1%
F gases	1	2	5	6	7	7	8	10.6%	11.4%	2.1%	1.0%	0.8%	0.4%
Total GHG from Energy and Industry	155	265	346	441	546	634	698	5.5%	2.7%	2.5%	2.2%	1.5%	1.0%
CO <sub>2</sub> Emissions from Fuel Comb.	122	199	260	341	436	518	576	5.0%	2.7%	2.7%	2.5%	1.7%	1.1%
Power generation/District heating	31	68	96	134	216	291	354	8.1%	3.6%	3.4%	4.8%	3.0%	2.0%
Industry	30	54	48	51	59	64	64	6.2%	-1.1%	0.6%	1.5%	0.7%	0.1%
Buildings	23	27	49	47	45	41	35	1.6%	6.2%	-0.3%	-0.6%	-0.9%	-1.6%
Agriculture	6	8	14	13	14	16	18	3.4%	5.4%	-1.2%	1.4%	1.2%	0.9%
Transport	26	34	43	82	84	82	77	2.6%	2.3%	6.6%	0.2%	-0.1%	-0.7%
Other	6	8	10	14	18	24	29	2.8%	2.3%	3.8%	2.6%	2.6%	2.0%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	11.1%	1.2%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	11.0%	1.2%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	11.2%	1.1%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	11.3%	1.2%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	25	27	32	52	65	80	93	0.9%	1.8%	4.9%	2.2%	2.0%	1.6%
Coal	12	15	19	18	21	23	27	2.0%	2.8%	-0.4%	1.5%	1.0%	1.4%
Oil	4	3	2	2	3	3	2	-2.8%	-1.0%	-1.4%	2.1%	-0.4%	-1.1%
Natural gas	0	1	1	1	2	3	5	11.6%	0.7%	4.7%	6.9%	6.9%	4.9%
Biomass	7	7	5	15	16	21	24	-1.0%	-3.5%	12.8%	0.4%	2.6%	1.6%
Nuclear <sup>1</sup>	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	19.1%	10.8%	6.4%
Hydro	2	3	4	6	7	8	8	2.9%	5.3%	2.4%	2.1%	1.0%	0.6%
Other renewables	0	0	1	10	16	21	24	13.1%	14.3%	23.1%	5.1%	2.6%	1.3%
Net Imports	26	51	72	87	108	123	132						
Coal	4	10	14	29	47	63	77						
Oil	19	28	28	36	37	36	33						
Natural gas	3	12	31	30	31	31	27						
Biomass	0	0	0	-7	-7	-8	-7						
Biofuels	0	0	0	0	0	1	1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	51	78	105	140	174	203	225	4.3%	3.0%	2.9%	2.2%	1.6%	1.0%
Coal	16	24	33	47	68	87	104	4.4%	3.0%	3.7%	3.8%	2.4%	1.8%
Oil	23	31	30	38	39	38	35	3.0%	-0.3%	2.3%	0.4%	-0.3%	-0.7%
Natural gas	3	13	31	31	33	34	33	16.0%	9.5%	-0.3%	0.6%	0.5%	-0.4%
Biomass	7	7	5	8	9	13	17	-1.0%	-3.5%	5.6%	1.4%	3.6%	3.0%
Nuclear <sup>1</sup>	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	19.1%	10.8%	6.4%
Hydro	2	3	4	6	7	8	8	2.9%	5.3%	2.4%	2.1%	1.0%	0.6%
Other renewables	0	0	1	10	16	21	24	13.1%	14.3%	23.1%	5.1%	2.6%	1.3%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	51	78	105	140	174	203	225	4.3%	3.0%	2.9%	2.2%	1.6%	1.0%
Energy for Power Generation	11	24	37	55	85	112	134	7.9%	4.6%	4.0%	4.5%	2.8%	1.8%
Other Energy Transformation & Losses	3	5	5	9	11	13	15	4.0%	0.5%	6.5%	1.5%	1.7%	1.7%
Final consumption	41	59	80	100	115	128	136	3.7%	3.1%	2.3%	1.4%	1.0%	0.6%
Steel, Non-Met. Minerals and Chem.	5	6	9	15	16	15	15	2.1%	4.6%	5.1%	0.5%	-0.7%	-0.2%
Other Industry	7	15	15	15	19	23	26	8.1%	0.3%	0.0%	2.3%	2.0%	1.2%
Non-Energy Use	3	4	7	7	8	10	11	2.3%	7.3%	-0.5%	2.0%	1.5%	1.0%
Residential	15	18	23	22	23	25	25	1.8%	2.7%	-0.3%	0.4%	0.6%	0.1%
Services	1	2	6	12	14	17	20	13.4%	9.7%	7.1%	2.2%	1.9%	1.3%
Agriculture	2	3	5	4	5	6	6	4.1%	5.5%	-1.1%	1.4%	1.2%	0.9%
Road	8	11	13	23	27	29	30	2.3%	2.4%	5.6%	1.5%	1.0%	0.4%
Rail	0	0	0	0	0	0	0	0.4%	-3.6%	1.8%	1.2%	1.0%	0.6%
Aviation	0	1	0	1	1	1	1	9.5%	-5.7%	2.7%	3.8%	2.9%	1.8%
Other Transport	0	0	1	1	1	1	1	-2.6%	11.9%	2.9%	2.4%	1.4%	0.5%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Turkey	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>9</b>	<b>21</b>	<b>32</b>	<b>39</b>	<b>61</b>	<b>82</b>	<b>99</b>	<b>8.7%</b>	<b>4.3%</b>	<b>2.2%</b>	<b>4.5%</b>	<b>2.9%</b>	<b>1.9%</b>
Coal	6	11	14	27	46	64	79	6.4%	2.6%	6.9%	5.6%	3.4%	2.2%
Oil	1	3	1	1	1	1	1	8.9%	-14.3%	3.0%	2.6%	0.3%	3.2%
Gas	2	7	17	11	13	14	14	13.3%	8.7%	-4.4%	1.6%	1.0%	0.2%
Biomass & Waste	0	0	0	0	1	2	3	n.s.	7.3%	14.2%	6.5%	7.4%	6.0%
Other	0	0	0	0	1	1	1	-0.5%	24.3%	23.4%	5.5%	1.1%	-0.4%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>58</b>	<b>125</b>	<b>211</b>	<b>305</b>	<b>446</b>	<b>586</b>	<b>695</b>	<b>8.1%</b>	<b>5.4%</b>	<b>3.7%</b>	<b>3.9%</b>	<b>2.8%</b>	<b>1.7%</b>
Coal	20	38	55	113	201	284	350	6.6%	3.7%	7.4%	5.9%	3.5%	2.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	4	9	2	3	4	4	6	9.0%	-13.5%	4.0%	2.7%	0.4%	3.3%
Gas	10	46	98	65	77	85	84	16.3%	7.8%	-4.1%	1.7%	1.0%	-0.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	2	4	8	15	n.s.	7.6%	14.6%	7.3%	8.1%	6.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	2	6	10	n.s.	n.s.	n.s.	19.5%	10.8%	6.4%
Hydro	23	31	52	66	81	89	94	2.9%	5.3%	2.4%	2.1%	1.0%	0.6%
Wind	0	0	3	46	54	68	65	n.s.	56.4%	31.8%	1.7%	2.2%	-0.4%
Solar	0	0	0	5	14	31	58	n.s.	n.s.	n.s.	11.7%	8.3%	6.6%
Other	0	0	1	5	9	11	12	-0.5%	24.3%	23.4%	5.6%	1.5%	1.0%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>17</b>	<b>27</b>	<b>49</b>	<b>107</b>	<b>144</b>	<b>184</b>	<b>206</b>	<b>5.0%</b>	<b>6.1%</b>	<b>8.1%</b>	<b>3.0%</b>	<b>2.4%</b>	<b>1.2%</b>
Coal	6	7	12	19	35	48	56	2.9%	5.1%	4.8%	6.1%	3.3%	1.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	2	2	2	3	4	4	-2.7%	-0.4%	2.7%	3.1%	3.0%	0.3%
Gas	2	7	18	32	37	42	35	12.3%	10.0%	5.9%	1.3%	1.2%	-1.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	1	1	2	n.s.	11.5%	9.7%	6.8%	8.1%	6.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	19.3%	10.6%	6.2%
Hydro	7	11	16	29	35	38	41	5.1%	3.5%	6.4%	1.8%	0.9%	0.6%
Wind	0	0	1	20	24	28	26	n.s.	53.0%	31.4%	1.5%	1.8%	-0.8%
Solar	0	0	0	3	9	20	38	n.s.	n.s.	n.s.	11.8%	8.3%	6.6%
Other	0	0	0	1	1	1	2	0.0%	20.2%	21.9%	5.6%	2.4%	1.5%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>41</b>	<b>59</b>	<b>80</b>	<b>100</b>	<b>115</b>	<b>128</b>	<b>136</b>	<b>3.7%</b>	<b>3.1%</b>	<b>2.3%</b>	<b>1.4%</b>	<b>1.0%</b>	<b>0.6%</b>
Coal	9	12	17	14	15	14	15	3.5%	3.3%	-1.7%	0.9%	-0.6%	0.2%
Oil	20	26	28	36	37	36	33	2.5%	0.8%	2.4%	0.3%	-0.3%	-0.8%
Gas	1	5	13	19	19	19	17	21.0%	10.3%	3.6%	0.0%	0.1%	-0.9%
Electricity	4	8	15	21	31	41	49	7.9%	5.9%	3.9%	3.9%	2.8%	1.8%
Heat	0	1	3	3	5	6	7	12.4%	9.2%	0.0%	4.1%	2.4%	1.8%
Biomass & Other	7	6	4	7	8	11	15	-1.1%	-3.7%	5.3%	0.9%	3.4%	2.6%
Share of Renewables <sup>3</sup> (%)	24%	16%	13%	19%	23%	28%	33%	-3.7%	-2.4%	4.1%	1.9%	2.0%	1.5%
<b>Industry (incl. non-energy use)</b>	<b>15</b>	<b>24</b>	<b>32</b>	<b>38</b>	<b>44</b>	<b>48</b>	<b>52</b>	<b>5.3%</b>	<b>2.7%</b>	<b>1.7%</b>	<b>1.6%</b>	<b>1.0%</b>	<b>0.7%</b>
Coal	5	10	9	9	11	10	11	6.5%	-0.8%	-0.3%	1.7%	-0.3%	0.8%
Oil	6	8	8	8	8	7	6	2.9%	-0.2%	-0.7%	0.7%	-0.9%	-2.0%
Gas	1	2	7	8	8	8	7	10.1%	14.0%	2.2%	-0.6%	-0.1%	-1.2%
Electricity	2	4	7	10	14	18	21	5.4%	5.3%	4.3%	3.3%	2.5%	1.6%
Heat	0	0	1	2	2	2	2	50.7%	10.9%	2.6%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	0	0	1	2	3	6	n.s.	n.s.	n.s.	4.4%	7.6%	4.9%
<b>Buildings</b>	<b>15</b>	<b>20</b>	<b>29</b>	<b>34</b>	<b>38</b>	<b>42</b>	<b>44</b>	<b>2.6%</b>	<b>3.7%</b>	<b>1.6%</b>	<b>1.0%</b>	<b>1.1%</b>	<b>0.6%</b>
Coal	3	2	7	5	5	4	4	-4.5%	13.9%	-3.8%	-0.8%	-1.1%	-1.4%
Oil	3	4	1	1	1	1	1	1.4%	-8.7%	-1.9%	1.2%	0.3%	-0.7%
Gas	0	3	6	10	9	9	7	50.4%	7.5%	4.7%	-0.7%	-0.9%	-1.9%
Electricity	1	4	7	10	14	18	22	10.7%	6.5%	3.4%	3.1%	2.6%	1.8%
Heat	0	1	2	1	3	4	5	7.4%	8.0%	-2.6%	8.2%	3.7%	2.5%
Biomass & Other	7	6	4	6	5	5	6	-1.1%	-3.7%	2.8%	-1.2%	0.6%	0.4%
<b>Agriculture</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>4.1%</b>	<b>5.5%</b>	<b>-1.1%</b>	<b>1.4%</b>	<b>1.2%</b>	<b>0.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	25.8%	0.0%	0.0%	0.0%
Oil	2	3	4	4	4	5	6	3.4%	5.3%	-1.3%	1.4%	1.2%	0.9%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	11.6%	1.2%	1.0%	0.7%
Electricity	0	0	0	0	1	1	1	18.2%	6.2%	0.1%	1.7%	1.5%	1.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>9</b>	<b>12</b>	<b>14</b>	<b>24</b>	<b>29</b>	<b>32</b>	<b>33</b>	<b>2.4%</b>	<b>2.1%</b>	<b>5.4%</b>	<b>1.6%</b>	<b>1.0%</b>	<b>0.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	9	12	14	23	23	22	20	2.4%	2.1%	5.0%	-0.1%	-0.4%	-0.9%
Gas	0	0	0	0	1	2	3	n.s.	36.7%	16.7%	17.6%	5.5%	2.8%
Electricity	0	0	0	0	3	5	6	8.3%	-6.5%	24.5%	24.0%	5.8%	2.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	1	2	4	n.s.	n.s.	53.9%	9.9%	6.4%	3.8%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>3</b>	<b>5</b>	<b>5</b>	<b>9</b>	<b>11</b>	<b>13</b>	<b>15</b>	<b>4.0%</b>	<b>0.5%</b>	<b>6.5%</b>	<b>1.5%</b>	<b>1.7%</b>	<b>1.7%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Mediterranean Middle East	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	27	36	46	54	65	73	80	2.9%	2.5%	1.6%	1.9%	1.2%	1.0%
GDP per capita (ppp, k\$'05)	5	7	8	10	12	15	20	2.7%	1.5%	1.8%	2.0%	2.5%	2.4%
GDP per capita (mer, k\$'05)	3	5	5	6	7	9	12	4.0%	-0.1%	1.8%	2.0%	2.5%	2.4%
Share Value Added - Agriculture (%)	6	3	1	2	2	2	2	-4.6%	-13.2%	10.4%	-0.9%	-0.9%	-0.7%
Share Value Added - Industry (%)	6	8	10	12	12	11	11	2.7%	2.5%	2.1%	-0.2%	-0.3%	-0.4%
Share Value Added - Services (%)	89	89	89	86	86	87	87	0.0%	0.1%	-0.4%	0.1%	0.1%	0.1%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	23	26	-7.8%	10.3%	-2.2%	1.8%	1.8%	1.2%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	28	24	47	43	48	69	93	-1.2%	6.8%	-1.0%	1.1%	3.7%	3.1%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	111	172	200	198	253	328	396	4.5%	1.5%	-0.1%	2.5%	2.6%	1.9%
Total GHG (excl. sinks)	111	173	202	199	254	329	398	4.5%	1.6%	-0.1%	2.5%	2.6%	1.9%
Total GHG (energy, industry, agriculture)	111	173	202	199	254	329	398	4.5%	1.6%	-0.1%	2.5%	2.6%	1.9%
CO <sub>2</sub>	91	147	172	177	221	285	345	4.9%	1.6%	0.3%	2.3%	2.6%	1.9%
CH <sub>4</sub>	12	17	19	14	22	30	35	4.0%	0.8%	-2.7%	4.6%	2.9%	1.7%
N <sub>2</sub> O	7	7	8	4	4	4	5	0.6%	1.2%	-7.8%	1.0%	1.1%	0.7%
F gases	1	1	3	4	6	9	13	3.4%	6.6%	4.4%	4.1%	3.8%	3.3%
Total GHG from Energy and Industry	103	163	190	196	251	326	394	4.8%	1.5%	0.3%	2.5%	2.6%	1.9%
CO <sub>2</sub> Emissions from Fuel Comb.	83	133	162	164	205	264	320	4.9%	2.0%	0.2%	2.2%	2.6%	1.9%
Power generation/District heating	29	59	88	91	121	167	209	7.4%	4.1%	0.4%	2.9%	3.2%	2.3%
Industry	9	14	15	13	17	22	27	4.7%	1.0%	-1.6%	2.5%	2.6%	2.2%
Buildings	14	17	19	14	15	16	17	2.5%	0.7%	-2.9%	0.7%	1.0%	0.4%
Agriculture	1	1	2	1	1	2	2	4.0%	2.5%	-3.7%	1.6%	1.5%	1.4%
Transport	21	31	31	39	43	47	50	4.0%	0.0%	2.5%	0.8%	0.9%	0.6%
Other	9	10	7	5	7	11	16	1.2%	-4.2%	-2.7%	3.7%	4.0%	3.7%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	5.1%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	5.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	5.0%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	5.2%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	25	37	40	27	35	43	53	3.9%	0.8%	-3.9%	2.9%	1.9%	2.1%
Coal	0	0	0	0	0	0	0	5.0%	-0.5%	n.s.	n.s.	n.s.	n.s.
Oil	23	31	28	15	17	17	16	3.1%	-0.7%	-6.0%	1.3%	-0.5%	-0.7%
Natural gas	1	5	9	9	12	16	20	12.9%	7.2%	-0.9%	3.6%	2.7%	2.3%
Biomass	0	0	0	0	1	1	1	3.0%	1.3%	11.0%	2.6%	0.5%	0.4%
Nuclear <sup>1</sup>	0	0	0	0	1	2	4	n.s.	n.s.	n.s.	17.1%	11.9%	9.0%
Hydro	0	0	0	0	0	0	0	1.5%	-0.6%	0.1%	0.5%	0.5%	0.5%
Other renewables	0	1	1	2	4	7	12	4.8%	6.8%	4.0%	8.2%	5.9%	4.9%
Net Imports	2	7	19	34	42	58	72						
Coal	2	7	8	13	21	32	43						
Oil	0	0	6	16	11	11	11						
Natural gas	0	0	5	4	10	14	16						
Biomass	0	0	0	0	0	1	1						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	27	44	58	60	77	101	125	4.9%	2.9%	0.4%	2.5%	2.7%	2.2%
Coal	2	7	8	13	21	32	43	11.2%	1.4%	5.9%	4.5%	4.4%	3.0%
Oil	23	31	34	31	28	27	27	3.1%	1.1%	-0.9%	-1.1%	-0.2%	-0.2%
Natural gas	1	5	15	13	23	31	37	13.2%	11.0%	-1.1%	5.6%	3.0%	1.8%
Biomass	0	0	0	1	1	1	2	2.9%	1.3%	13.3%	5.4%	4.4%	3.5%
Nuclear <sup>1</sup>	0	0	0	0	1	2	4	n.s.	n.s.	n.s.	17.1%	11.9%	9.0%
Hydro	0	0	0	0	0	0	0	1.5%	-0.6%	0.1%	0.5%	0.5%	0.5%
Other renewables	0	1	1	2	4	7	12	4.8%	6.8%	4.0%	8.2%	5.9%	4.9%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	27	44	58	60	77	101	125	4.9%	2.9%	0.4%	2.5%	2.7%	2.2%
Energy for Power Generation	9	19	31	30	42	59	77	7.0%	5.1%	-0.2%	3.3%	3.4%	2.7%
Other Energy Transformation & Losses	3	3	2	3	5	7	9	-1.1%	-4.7%	8.0%	3.5%	3.2%	2.8%
Final consumption	18	29	37	38	48	62	76	5.0%	2.3%	0.5%	2.3%	2.5%	2.1%
Steel, Non-Met. Minerals and Chem.	0	1	2	1	2	2	2	17.8%	2.1%	-2.4%	2.3%	2.4%	2.0%
Other Industry	3	4	5	5	7	9	12	2.1%	2.7%	-0.2%	3.0%	3.4%	2.9%
Non-Energy Use	1	4	3	3	3	4	5	11.9%	-2.3%	-1.8%	2.1%	2.2%	1.7%
Residential	3	6	8	7	9	11	13	6.3%	3.3%	-0.9%	1.9%	2.3%	1.9%
Services	3	4	6	6	8	10	13	2.4%	2.9%	-0.1%	3.0%	3.0%	2.6%
Agriculture	0	1	1	1	1	1	1	4.6%	2.7%	-0.9%	2.0%	1.9%	1.8%
Road	6	9	12	16	19	24	28	3.7%	3.1%	2.7%	2.1%	2.2%	1.7%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Aviation	0	0	0	0	0	0	0	32.1%	-12.3%	0.2%	4.1%	3.7%	2.8%
Other Transport	0	0	0	0	0	0	0	n.s.	5.8%	-6.2%	2.8%	2.3%	1.9%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Mediterranean Middle East	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>9</b>	<b>18</b>	<b>29</b>	<b>28</b>	<b>37</b>	<b>50</b>	<b>61</b>	<b>7.3%</b>	<b>5.2%</b>	<b>-0.4%</b>	<b>2.8%</b>	<b>3.0%</b>	<b>2.1%</b>
Coal	2	6	7	13	19	29	38	10.6%	1.7%	5.5%	4.4%	4.2%	2.7%
Oil	6	9	9	6	4	3	4	4.5%	0.2%	-3.8%	-5.4%	-1.1%	1.4%
Gas	1	2	13	9	14	17	19	13.8%	18.1%	-3.2%	4.4%	1.9%	1.1%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	9.0%	4.0%	3.5%	3.8%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>38</b>	<b>85</b>	<b>136</b>	<b>145</b>	<b>214</b>	<b>313</b>	<b>428</b>	<b>8.5%</b>	<b>4.8%</b>	<b>0.7%</b>	<b>3.9%</b>	<b>3.9%</b>	<b>3.2%</b>
Coal	10	29	34	60	95	148	198	10.9%	1.6%	5.7%	4.8%	4.5%	3.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	21	42	39	27	15	14	16	7.1%	-0.8%	-3.5%	-5.5%	-1.0%	1.6%
Gas	3	10	59	48	74	89	101	13.6%	19.3%	-2.0%	4.4%	1.9%	1.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	0	0	1	n.s.	9.0%	5.4%	4.7%	4.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	2	6	15	n.s.	n.s.	n.s.	17.2%	12.0%	9.0%
Hydro	3	4	4	4	4	4	4	1.5%	-0.6%	0.1%	0.5%	0.5%	0.5%
Wind	0	0	0	1	6	21	46	11.6%	17.0%	54.2%	19.4%	12.4%	8.3%
Solar	0	0	0	5	16	31	45	n.s.	n.s.	34.6%	12.6%	6.5%	4.0%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	29.0%	18.6%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>11</b>	<b>20</b>	<b>27</b>	<b>39</b>	<b>53</b>	<b>74</b>	<b>101</b>	<b>6.4%</b>	<b>2.9%</b>	<b>3.7%</b>	<b>3.0%</b>	<b>3.4%</b>	<b>3.2%</b>
Coal	2	4	5	9	15	23	29	7.8%	1.2%	6.1%	5.7%	4.3%	2.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	7	9	6	6	4	3	3	2.9%	-4.3%	0.3%	-4.3%	-2.7%	0.1%
Gas	1	5	15	19	19	17	17	19.5%	11.5%	2.8%	-0.2%	-0.8%	0.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	5.1%	5.5%	4.6%	4.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	17.0%	11.8%	8.8%
Hydro	1	2	2	2	2	2	2	4.6%	-2.0%	-0.4%	0.5%	0.5%	0.5%
Wind	0	0	0	0	3	9	19	n.s.	18.1%	51.2%	19.2%	12.3%	8.2%
Solar	0	0	0	3	10	19	28	n.s.	n.s.	33.8%	12.6%	6.4%	3.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	28.4%	18.0%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>18</b>	<b>29</b>	<b>37</b>	<b>38</b>	<b>48</b>	<b>62</b>	<b>76</b>	<b>5.0%</b>	<b>2.3%</b>	<b>0.5%</b>	<b>2.3%</b>	<b>2.5%</b>	<b>2.1%</b>
Coal	0	0	0	1	1	2	3	30.2%	-0.1%	13.9%	6.3%	5.6%	4.8%
Oil	14	20	24	24	23	23	22	3.5%	1.9%	0.0%	-0.3%	-0.1%	-0.4%
Gas	1	3	2	2	6	10	14	12.8%	-3.6%	1.6%	10.9%	5.6%	3.1%
Electricity	3	6	9	10	15	23	31	8.4%	4.8%	0.8%	4.1%	4.0%	3.2%
Heat	0	1	1	1	2	3	4	4.8%	6.6%	0.9%	5.0%	3.1%	3.1%
Biomass & Other	0	0	0	0	1	2	3	2.9%	-0.1%	11.7%	6.5%	7.2%	5.9%
Share of Renewables <sup>3</sup> (%)	4%	4%	5%	7%	12%	17%	23%	-0.8%	1.5%	3.6%	5.8%	3.9%	2.9%
<b>Industry (incl. non-energy use)</b>	<b>5</b>	<b>9</b>	<b>10</b>	<b>9</b>	<b>12</b>	<b>15</b>	<b>20</b>	<b>6.9%</b>	<b>0.7%</b>	<b>-1.1%</b>	<b>2.6%</b>	<b>2.9%</b>	<b>2.5%</b>
Coal	0	0	0	1	1	2	3	30.2%	-0.1%	13.9%	6.3%	5.6%	4.8%
Oil	4	5	5	4	5	5	4	2.6%	1.2%	-2.2%	0.3%	0.2%	-0.3%
Gas	0	2	2	1	2	3	4	55.4%	-3.6%	-3.0%	6.1%	4.5%	2.9%
Electricity	1	2	3	3	4	6	8	7.3%	3.7%	0.3%	3.3%	3.9%	3.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	8.1%	6.7%	5.2%
<b>Buildings</b>	<b>7</b>	<b>10</b>	<b>14</b>	<b>13</b>	<b>17</b>	<b>21</b>	<b>27</b>	<b>4.4%</b>	<b>3.1%</b>	<b>-0.6%</b>	<b>2.4%</b>	<b>2.6%</b>	<b>2.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	4	5	6	4	3	3	2	3.5%	0.9%	-3.9%	-2.1%	-1.8%	-1.8%
Gas	1	0	0	1	2	4	4	-9.1%	-4.0%	14.0%	11.6%	5.1%	2.1%
Electricity	2	4	7	7	9	12	16	9.1%	5.4%	0.6%	2.6%	3.1%	2.8%
Heat	0	1	1	1	2	3	4	4.8%	6.6%	0.9%	5.0%	3.1%	3.1%
Biomass & Other	0	0	0	0	0	0	0	2.9%	-0.1%	4.8%	-2.3%	1.2%	3.8%
<b>Agriculture</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4.6%</b>	<b>2.7%</b>	<b>-0.9%</b>	<b>2.0%</b>	<b>1.9%</b>	<b>1.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	1	0	0	1	1	4.0%	2.5%	-3.7%	1.6%	1.5%	1.4%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	1	1	1	5.8%	3.0%	3.0%	2.4%	2.3%	2.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>6</b>	<b>9</b>	<b>12</b>	<b>16</b>	<b>19</b>	<b>24</b>	<b>29</b>	<b>3.9%</b>	<b>2.8%</b>	<b>2.7%</b>	<b>2.1%</b>	<b>2.2%</b>	<b>1.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	6	9	12	15	15	15	15	3.9%	2.8%	2.3%	0.0%	0.0%	-0.3%
Gas	0	0	0	0	2	3	5	n.s.	n.s.	n.s.	22.9%	7.4%	4.1%
Electricity	0	0	0	0	2	4	7	n.s.	n.s.	n.s.	28.2%	7.6%	4.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	2	n.s.	n.s.	n.s.	12.5%	8.6%	6.2%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>7</b>	<b>9</b>	<b>-1.1%</b>	<b>-4.7%</b>	<b>8.0%</b>	<b>3.5%</b>	<b>3.2%</b>	<b>2.8%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Rest Gulf	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	34	48	69	90	111	133	155	3.3%	3.8%	2.7%	2.1%	1.8%	1.5%
GDP per capita (ppp, k\$'05)	6	11	12	11	13	14	15	7.2%	0.5%	-0.7%	1.7%	0.9%	0.4%
GDP per capita (mer, k\$'05)	5	7	8	10	12	13	13	4.2%	1.3%	2.3%	1.7%	0.9%	0.4%
Share Value Added - Agriculture (%)	9	6	1	1	1	1	1	-5.1%	-15.7%	-4.9%	-0.7%	-0.3%	-0.1%
Share Value Added - Industry (%)	42	49	50	44	44	43	43	1.5%	0.1%	-1.1%	-0.2%	-0.1%	-0.1%
Share Value Added - Services (%)	48	45	49	55	56	56	57	-0.7%	0.9%	1.1%	0.2%	0.1%	0.0%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	23	26	-7.8%	10.3%	-2.2%	1.8%	1.8%	1.2%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	28	24	47	43	48	69	93	-1.2%	6.8%	-1.0%	1.1%	3.7%	3.1%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	290	428	714	1 014	1 282	1 522	1 661	4.0%	5.3%	3.6%	2.4%	1.7%	0.9%
Total GHG (excl. sinks)	290	429	715	1 015	1 283	1 522	1 663	4.0%	5.2%	3.6%	2.4%	1.7%	0.9%
Total GHG (energy, industry, agriculture)	290	429	715	1 015	1 283	1 522	1 663	4.0%	5.2%	3.6%	2.4%	1.7%	0.9%
CO <sub>2</sub>	220	333	569	817	1 058	1 253	1 390	4.3%	5.5%	3.7%	2.6%	1.7%	1.0%
CH <sub>4</sub>	57	85	131	185	209	251	252	4.2%	4.4%	3.6%	1.2%	1.8%	0.1%
N <sub>2</sub> O	10	9	12	8	9	10	11	-1.3%	2.8%	-3.4%	1.1%	1.0%	0.5%
F gases	4	2	4	5	6	8	10	-5.5%	6.0%	1.9%	2.7%	2.4%	2.0%
Total GHG from Energy and Industry	279	416	699	1 008	1 276	1 514	1 655	4.1%	5.3%	3.7%	2.4%	1.7%	0.9%
CO <sub>2</sub> Emissions from Fuel Comb.	180	292	508	731	943	1 120	1 246	4.9%	5.7%	3.7%	2.6%	1.7%	1.1%
Power generation/District heating	60	105	204	242	316	379	434	5.7%	6.9%	1.7%	2.7%	1.8%	1.4%
Industry	48	73	130	249	339	407	449	4.2%	5.9%	6.7%	3.1%	1.9%	1.0%
Buildings	9	14	17	24	31	40	47	4.5%	2.3%	3.2%	2.6%	2.6%	1.5%
Agriculture	1	1	3	3	4	4	4	9.9%	9.4%	-0.8%	1.4%	1.0%	0.8%
Transport	42	55	83	113	118	124	124	2.8%	4.2%	3.1%	0.4%	0.5%	0.0%
Other	21	44	71	100	136	165	188	7.8%	4.9%	3.6%	3.0%	2.0%	1.3%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	6.5%	1.3%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	6.6%	1.3%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	6.2%	1.1%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	6.5%	1.3%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	367	559	728	1 108	1 393	1 592	1 537	4.3%	2.7%	4.3%	2.3%	1.3%	-0.4%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	331	482	531	782	891	1 084	1 072	3.8%	1.0%	3.9%	1.3%	2.0%	-0.1%
Natural gas	36	76	196	324	500	505	462	7.8%	9.9%	5.1%	4.4%	0.1%	-0.9%
Biomass	0	0	0	1	1	1	1	2.0%	6.1%	16.9%	6.5%	1.5%	-2.2%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	6.2%	3.1%	1.8%
Hydro	0	0	0	0	1	1	1	-13.5%	22.8%	2.0%	0.6%	0.5%	0.5%
Other renewables	0	0	0	0	0	1	2	n.s.	n.s.	8.0%	7.9%	7.8%	6.0%
Net Imports	- 297	- 447	- 523	- 787	- 976	- 1 100	- 992						
Coal	0	0	1	3	5	7	10						
Oil	- 295	- 431	- 444	- 687	- 791	- 972	- 953						
Natural gas	- 2	- 16	- 80	- 104	- 191	- 137	- 50						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	1	1	1	1	1						
Primary Energy Demand <sup>2</sup>	69	111	205	321	416	492	545	4.8%	6.3%	4.6%	2.6%	1.7%	1.0%
Coal	0	0	1	3	5	7	10	n.s.	n.s.	14.2%	5.4%	4.5%	3.3%
Oil	36	51	87	96	100	112	119	3.7%	5.5%	0.9%	0.4%	1.2%	0.6%
Natural gas	33	60	116	220	309	369	411	6.0%	6.9%	6.6%	3.4%	1.8%	1.1%
Biomass	0	0	0	1	1	1	1	2.1%	6.1%	17.7%	6.3%	2.3%	-0.2%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	6.2%	3.1%	1.8%
Hydro	0	0	0	0	1	1	1	-13.5%	22.8%	2.0%	0.6%	0.5%	0.5%
Other renewables	0	0	0	0	0	1	2	n.s.	n.s.	8.0%	7.9%	7.8%	6.0%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	69	111	205	321	416	492	545	4.8%	6.3%	4.6%	2.6%	1.7%	1.0%
Energy for Power Generation	23	40	79	98	130	157	180	5.7%	7.0%	2.2%	2.9%	1.9%	1.4%
Other Energy Transformation & Losses	8	14	28	56	73	85	95	5.9%	7.3%	7.1%	2.7%	1.6%	1.0%
Final consumption	44	67	118	197	256	306	340	4.3%	5.8%	5.2%	2.7%	1.8%	1.1%
Steel, Non-Met. Minerals and Chem.	2	3	6	16	23	26	26	5.6%	5.0%	10.7%	3.9%	1.1%	0.3%
Other Industry	17	26	45	81	108	132	148	4.6%	5.6%	6.1%	3.0%	2.0%	1.2%
Non-Energy Use	5	6	13	24	33	40	45	3.5%	7.2%	6.3%	3.3%	2.1%	1.1%
Residential	6	9	14	20	26	32	38	4.3%	4.2%	3.9%	2.5%	2.3%	1.6%
Services	1	3	8	12	17	22	26	11.0%	10.6%	3.7%	3.9%	2.6%	1.7%
Agriculture	0	0	1	1	1	1	1	7.1%	9.5%	-0.6%	1.4%	1.0%	0.8%
Road	14	19	32	44	48	52	54	3.3%	5.1%	3.2%	0.8%	0.9%	0.4%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	2.6%	0.0%	0.4%	0.3%
Other Transport	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest Gulf	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>23</b>	<b>40</b>	<b>78</b>	<b>97</b>	<b>129</b>	<b>155</b>	<b>177</b>	<b>5.8%</b>	<b>7.0%</b>	<b>2.2%</b>	<b>2.9%</b>	<b>1.9%</b>	<b>1.3%</b>
Coal	0	0	0	1	2	3	5	n.s.	n.s.	n.s.	10.5%	6.4%	4.6%
Oil	9	14	26	17	15	15	15	5.0%	6.2%	-4.3%	-0.9%	-0.2%	0.2%
Gas	14	26	52	80	112	137	157	6.3%	7.4%	4.3%	3.4%	2.0%	1.4%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	4.5%	4.1%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>79</b>	<b>140</b>	<b>285</b>	<b>438</b>	<b>629</b>	<b>821</b>	<b>1 002</b>	<b>5.9%</b>	<b>7.4%</b>	<b>4.4%</b>	<b>3.7%</b>	<b>2.7%</b>	<b>2.0%</b>
Coal	0	0	0	3	8	16	25	n.s.	n.s.	n.s.	11.0%	6.8%	4.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	31	53	62	70	64	64	66	5.5%	1.6%	1.2%	-0.8%	-0.1%	0.3%
Gas	45	86	217	357	545	725	888	6.7%	9.7%	5.1%	4.3%	2.9%	2.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	4.8%	4.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	6.3%	3.1%	1.7%
Hydro	3	1	5	6	6	6	7	-13.5%	22.8%	2.0%	0.6%	0.5%	0.5%
Wind	0	0	0	1	2	5	9	n.s.	n.s.	n.s.	11.9%	8.6%	6.6%
Solar	0	0	1	2	3	4	7	n.s.	n.s.	4.5%	5.6%	4.5%	4.3%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.4%	13.4%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>26</b>	<b>35</b>	<b>68</b>	<b>107</b>	<b>123</b>	<b>156</b>	<b>181</b>	<b>2.9%</b>	<b>7.0%</b>	<b>4.6%</b>	<b>1.4%</b>	<b>2.4%</b>	<b>1.5%</b>
Coal	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	11.1%	6.9%	5.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	14	14	16	20	13	13	13	-0.1%	1.2%	2.6%	-4.4%	0.1%	0.1%
Gas	10	18	50	82	103	133	153	5.7%	10.5%	5.2%	2.3%	2.6%	1.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	4.8%	4.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	6.1%	2.9%	1.5%
Hydro	2	3	3	3	3	3	4	4.7%	-0.4%	2.2%	0.6%	0.5%	0.5%
Wind	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	11.7%	8.4%	6.4%
Solar	0	0	1	1	2	3	4	n.s.	n.s.	5.4%	6.2%	4.6%	4.3%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	12.9%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>44</b>	<b>67</b>	<b>118</b>	<b>197</b>	<b>256</b>	<b>306</b>	<b>340</b>	<b>4.3%</b>	<b>5.8%</b>	<b>5.2%</b>	<b>2.7%</b>	<b>1.8%</b>	<b>1.1%</b>
Coal	0	0	1	2	3	4	5	n.s.	n.s.	11.2%	3.2%	3.1%	2.1%
Oil	24	33	55	78	87	99	103	3.2%	5.3%	3.5%	1.1%	1.3%	0.5%
Gas	15	25	43	87	123	146	162	5.2%	5.7%	7.4%	3.5%	1.8%	1.0%
Electricity	6	10	19	30	42	55	66	6.2%	6.8%	4.4%	3.5%	2.6%	2.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	32.5%	8.8%
Biomass & Other	0	0	0	1	1	2	3	2.1%	6.1%	17.1%	7.1%	6.3%	4.1%
Share of Renewables <sup>3</sup> (%)	1%	0%	1%	1%	1%	1%	1%	-11.9%	11.4%	1.7%	0.7%	2.4%	2.6%
<b>Industry (incl. non-energy use)</b>	<b>23</b>	<b>36</b>	<b>63</b>	<b>120</b>	<b>164</b>	<b>198</b>	<b>220</b>	<b>4.4%</b>	<b>5.9%</b>	<b>6.7%</b>	<b>3.2%</b>	<b>1.9%</b>	<b>1.1%</b>
Coal	0	0	1	2	3	4	5	n.s.	n.s.	11.2%	3.2%	3.1%	2.1%
Oil	7	9	16	27	36	47	53	2.4%	6.4%	5.0%	3.0%	2.6%	1.2%
Gas	15	24	42	85	115	133	144	5.1%	5.7%	7.1%	3.1%	1.5%	0.8%
Electricity	1	3	4	7	10	14	18	6.3%	3.1%	6.6%	4.5%	3.2%	2.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-5.5%	-1.1%	-1.2%
<b>Buildings</b>	<b>7</b>	<b>12</b>	<b>22</b>	<b>32</b>	<b>43</b>	<b>54</b>	<b>64</b>	<b>5.5%</b>	<b>6.1%</b>	<b>3.8%</b>	<b>3.0%</b>	<b>2.5%</b>	<b>1.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	4	5	6	5	4	4	4.3%	2.5%	1.2%	-2.1%	-1.3%	-1.2%
Gas	0	0	0	2	7	11	15	12.0%	-2.7%	28.5%	12.6%	5.5%	2.7%
Electricity	4	7	16	23	31	38	44	6.2%	7.9%	3.8%	2.8%	2.2%	1.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	32.5%	8.8%
Biomass & Other	0	0	0	0	0	1	1	2.1%	6.1%	9.8%	2.9%	4.2%	2.3%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>7.1%</b>	<b>9.5%</b>	<b>-0.6%</b>	<b>1.4%</b>	<b>1.0%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	1	1	1	1	1	9.9%	9.4%	-0.8%	1.4%	1.0%	0.8%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	-24.9%	22.5%	4.6%	2.4%	2.0%	1.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>14</b>	<b>19</b>	<b>32</b>	<b>44</b>	<b>48</b>	<b>52</b>	<b>55</b>	<b>3.3%</b>	<b>5.2%</b>	<b>3.2%</b>	<b>0.8%</b>	<b>0.9%</b>	<b>0.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	14	19	32	44	45	46	46	3.3%	5.2%	3.1%	0.2%	0.3%	-0.1%
Gas	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	24.6%	6.0%	3.5%
Electricity	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	32.5%	6.8%	4.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	2	n.s.	n.s.	n.s.	25.9%	8.4%	5.1%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>8</b>	<b>14</b>	<b>28</b>	<b>56</b>	<b>73</b>	<b>85</b>	<b>95</b>	<b>5.9%</b>	<b>7.3%</b>	<b>7.1%</b>	<b>2.7%</b>	<b>1.6%</b>	<b>1.0%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

China	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	1 155	1 270	1 342	1 403	1 416	1 395	1 349	1.0%	0.5%	0.5%	0.1%	-0.1%	-0.3%
GDP per capita (ppp, k\$'05)	1	3	7	13	21	30	38	8.9%	9.6%	6.5%	4.9%	3.6%	2.3%
GDP per capita (mer, k\$'05)	1	1	3	6	9	13	16	8.6%	9.4%	6.4%	4.9%	3.6%	2.3%
Share Value Added - Agriculture (%)	22	13	10	8	8	7	7	-5.1%	-3.0%	-1.7%	-0.9%	-0.4%	-0.2%
Share Value Added - Industry (%)	34	42	45	43	37	32	27	2.1%	0.8%	-0.6%	-1.3%	-1.6%	-1.5%
Share Value Added - Services (%)	44	45	45	49	55	61	66	0.3%	0.0%	0.9%	1.2%	1.0%	0.7%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	23	26	-7.8%	10.3%	-2.2%	1.8%	1.8%	1.2%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	28	24	47	43	48	69	93	-1.2%	6.8%	-1.0%	1.1%	3.7%	3.1%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	3 850	4 827	11 074	15 432	18 441	19 431	18 641	2.3%	8.7%	3.4%	1.8%	0.5%	-0.4%
Total GHG (excl. sinks)	3 953	5 159	11 367	15 784	18 769	19 801	19 102	2.7%	8.2%	3.3%	1.7%	0.5%	-0.4%
Total GHG (energy, industry, agriculture)	3 953	5 159	11 367	15 784	18 769	19 801	19 102	2.7%	8.2%	3.3%	1.7%	0.5%	-0.4%
CO <sub>2</sub>	2 587	3 686	9 016	12 923	15 510	16 420	15 819	3.6%	9.4%	3.7%	1.8%	0.6%	-0.4%
CH <sub>4</sub>	1 016	1 045	1 644	1 894	2 087	2 097	1 970	0.3%	4.6%	1.4%	1.0%	0.0%	-0.6%
N <sub>2</sub> O	338	378	529	649	730	757	745	1.1%	3.4%	2.1%	1.2%	0.4%	-0.2%
F gases	13	51	177	318	441	528	568	14.8%	13.3%	6.0%	3.3%	1.8%	0.7%
Total GHG from Energy and Industry	3 177	4 371	10 363	14 614	17 434	18 392	17 674	3.2%	9.0%	3.5%	1.8%	0.5%	-0.4%
CO <sub>2</sub> Emissions from Fuel Comb.	2 348	3 251	7 869	11 183	13 483	14 337	13 859	3.3%	9.2%	3.6%	1.9%	0.6%	-0.3%
Power generation/District heating	615	1 235	3 203	4 792	6 264	7 286	7 473	7.2%	10.0%	4.1%	2.7%	1.5%	0.3%
Industry	921	1 049	2 828	3 452	3 685	3 173	2 539	1.3%	10.4%	2.0%	0.7%	-1.5%	-2.2%
Buildings	446	319	491	606	623	623	592	-3.3%	4.4%	2.1%	0.3%	0.0%	-0.5%
Agriculture	92	48	89	104	108	110	109	-6.3%	6.3%	1.5%	0.4%	0.2%	-0.1%
Transport	119	242	545	995	1 271	1 470	1 497	7.3%	8.4%	6.2%	2.5%	1.5%	0.2%
Other	155	357	714	1 233	1 532	1 674	1 649	8.7%	7.2%	5.6%	2.2%	0.9%	-0.2%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	24.7%	0.6%	-0.1%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	24.6%	0.7%	-0.1%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	25.0%	0.5%	-0.2%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	24.5%	0.7%	0.0%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	943	1 188	2 306	2 923	3 493	3 657	3 486	2.3%	6.9%	2.4%	1.8%	0.5%	-0.5%
Coal	581	777	1 713	2 019	2 247	2 110	1 768	2.9%	8.2%	1.7%	1.1%	-0.6%	-1.8%
Oil	137	161	201	239	238	180	118	1.6%	2.3%	1.8%	-0.1%	-2.7%	-4.2%
Natural gas	13	23	82	151	288	460	532	5.8%	13.5%	6.3%	6.7%	4.8%	1.5%
Biomass	200	202	213	241	262	280	287	0.1%	0.5%	1.2%	0.8%	0.7%	0.2%
Nuclear <sup>1</sup>	0	4	19	80	163	249	325	n.s.	15.9%	15.3%	7.4%	4.3%	2.7%
Hydro	11	19	62	107	147	152	154	5.8%	12.5%	5.6%	3.2%	0.3%	0.1%
Other renewables	0	1	15	85	148	226	303	29.4%	29.8%	19.2%	5.7%	4.3%	3.0%
Net Imports	- 55	8	348	996	1 342	1 606	1 763						
Coal	- 31	- 48	115	423	606	797	990						
Oil	- 26	59	228	513	642	740	743						
Natural gas	1	- 3	7	63	95	67	24						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	1	3	8						
Electricity	0	- 1	- 1	- 2	- 2	- 2	- 2						
Primary Energy Demand <sup>2</sup>	888	1 195	2 654	3 919	4 835	5 263	5 249	3.0%	8.3%	4.0%	2.1%	0.9%	0.0%
Coal	550	729	1 828	2 442	2 853	2 907	2 758	2.9%	9.6%	2.9%	1.6%	0.2%	-0.5%
Oil	111	220	429	752	880	920	861	7.1%	6.9%	5.8%	1.6%	0.5%	-0.7%
Natural gas	14	20	89	214	383	527	556	3.4%	16.1%	9.1%	6.0%	3.2%	0.5%
Biomass	200	202	213	241	262	280	287	0.1%	0.5%	1.2%	0.9%	0.7%	0.2%
Nuclear <sup>1</sup>	0	4	19	80	163	249	325	n.s.	15.9%	15.3%	7.4%	4.3%	2.7%
Hydro	11	19	62	107	147	152	154	5.8%	12.5%	5.6%	3.2%	0.3%	0.1%
Other renewables	0	1	15	85	148	226	303	29.4%	29.8%	19.2%	5.7%	4.3%	3.0%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	888	1 195	2 654	3 919	4 835	5 263	5 249	3.0%	8.3%	4.0%	2.1%	0.9%	0.0%
Energy for Power Generation	168	339	919	1 531	2 124	2 586	2 806	7.3%	10.5%	5.2%	3.3%	2.0%	0.8%
Other Energy Transformation & Losses	59	120	288	473	589	624	612	7.3%	9.2%	5.1%	2.2%	0.6%	-0.2%
Final consumption	715	854	1 817	2 601	3 095	3 259	3 181	1.8%	7.8%	3.6%	1.8%	0.5%	-0.2%
Steel, Non-Met. Minerals and Chem.	161	247	675	912	1 039	952	828	4.4%	10.6%	3.0%	1.3%	-0.9%	-1.4%
Other Industry	119	117	311	470	617	697	694	-0.2%	10.3%	4.2%	2.8%	1.2%	0.0%
Non-Energy Use	44	61	137	191	200	191	165	3.4%	8.3%	3.4%	0.5%	-0.5%	-1.4%
Residential	300	282	357	438	454	453	432	-0.6%	2.4%	2.1%	0.4%	0.0%	-0.5%
Services	25	39	95	165	240	326	390	4.4%	9.4%	5.7%	3.8%	3.1%	1.8%
Agriculture	30	18	34	40	43	45	45	-4.8%	6.2%	1.7%	0.8%	0.4%	0.0%
Road	21	63	169	313	399	468	488	11.9%	10.3%	6.4%	2.5%	1.6%	0.4%
Rail	12	10	12	14	17	20	21	-1.9%	2.5%	1.7%	1.9%	1.4%	0.7%
Aviation	1	4	11	25	40	53	60	22.1%	10.3%	8.5%	4.6%	3.0%	1.2%
Other Transport	2	12	17	33	46	55	57	16.9%	3.8%	6.6%	3.6%	1.7%	0.3%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

China	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>157</b>	<b>314</b>	<b>823</b>	<b>1 259</b>	<b>1 666</b>	<b>1 959</b>	<b>2 025</b>	<b>7.2%</b>	<b>10.1%</b>	<b>4.3%</b>	<b>2.8%</b>	<b>1.6%</b>	<b>0.3%</b>
Coal	144	299	792	1 159	1 483	1 704	1 746	7.6%	10.2%	3.9%	2.5%	1.4%	0.2%
Oil	12	13	4	26	40	41	37	0.6%	-11.6%	21.3%	4.3%	0.4%	-1.0%
Gas	1	1	15	39	100	158	172	7.5%	28.1%	9.9%	9.8%	4.7%	0.9%
Biomass & Waste	0	1	12	34	44	56	69	n.s.	30.2%	11.4%	2.5%	2.5%	2.2%
Other	0	0	0	0	0	0	0	6.7%	1.4%	0.8%	-16.9%	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>621</b>	<b>1 356</b>	<b>4 234</b>	<b>7 979</b>	<b>11 532</b>	<b>14 150</b>	<b>15 611</b>	<b>8.1%</b>	<b>12.1%</b>	<b>6.5%</b>	<b>3.8%</b>	<b>2.1%</b>	<b>1.0%</b>
Coal	441	1 061	3 250	5 353	7 026	8 122	8 278	9.2%	11.8%	5.1%	2.8%	1.5%	0.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	50	47	13	112	170	178	162	-0.6%	-12.0%	23.8%	4.3%	0.4%	-0.9%
Gas	3	6	69	195	525	870	1 011	7.6%	28.2%	10.9%	10.4%	5.2%	1.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	2	34	121	160	232	330	n.s.	30.2%	13.6%	2.9%	3.8%	3.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	17	74	316	654	1 008	1 323	n.s.	16.0%	15.6%	7.6%	4.4%	2.8%
Hydro	127	222	722	1 243	1 707	1 762	1 788	5.8%	12.5%	5.6%	3.2%	0.3%	0.1%
Wind	0	1	70	494	935	1 440	1 950	n.s.	n.s.	21.5%	6.6%	4.4%	3.1%
Solar	0	0	1	146	353	530	743	26.7%	31.7%	n.s.	9.2%	4.2%	3.4%
Other	0	0	0	0	2	8	27	6.7%	2.2%	7.0%	20.3%	16.9%	12.8%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>149</b>	<b>336</b>	<b>1 012</b>	<b>1 873</b>	<b>2 768</b>	<b>3 384</b>	<b>3 995</b>	<b>8.5%</b>	<b>11.7%</b>	<b>6.3%</b>	<b>4.0%</b>	<b>2.0%</b>	<b>1.7%</b>
Coal	92	225	701	1 059	1 414	1 567	1 720	9.3%	12.0%	4.2%	2.9%	1.0%	0.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	18	20	15	24	30	30	33	1.1%	-2.9%	4.7%	2.3%	0.2%	0.7%
Gas	3	8	31	62	114	188	247	11.7%	14.3%	7.1%	6.3%	5.1%	2.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	7	18	22	32	46	n.s.	30.4%	10.5%	2.0%	3.6%	3.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	2	10	45	91	138	177	n.s.	16.6%	16.1%	7.3%	4.2%	2.5%
Hydro	36	79	216	354	463	476	482	8.2%	10.5%	5.1%	2.7%	0.3%	0.1%
Wind	0	0	31	211	395	599	797	n.s.	57.2%	21.0%	6.5%	4.2%	2.9%
Solar	0	0	1	99	238	354	489	26.7%	31.7%	n.s.	9.2%	4.1%	3.3%
Other	0	0	0	0	0	1	3	0.0%	0.4%	3.5%	20.1%	16.3%	12.3%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>715</b>	<b>854</b>	<b>1 817</b>	<b>2 601</b>	<b>3 095</b>	<b>3 259</b>	<b>3 181</b>	<b>1.8%</b>	<b>7.8%</b>	<b>3.6%</b>	<b>1.8%</b>	<b>0.5%</b>	<b>-0.2%</b>
Coal	365	340	804	904	922	761	605	-0.7%	9.0%	1.2%	0.2%	-1.9%	-2.3%
Oil	84	180	383	668	776	815	764	7.9%	7.8%	5.7%	1.5%	0.5%	-0.6%
Gas	10	15	61	142	219	277	285	4.2%	15.2%	8.8%	4.5%	2.4%	0.3%
Electricity	41	89	297	568	824	1 012	1 119	8.0%	12.8%	6.7%	3.8%	2.1%	1.0%
Heat	13	28	72	114	140	175	198	7.7%	10.0%	4.7%	2.0%	2.3%	1.2%
Biomass & Other	200	202	200	205	215	218	209	0.1%	-0.1%	0.2%	0.5%	0.2%	-0.4%
Share of Renewables <sup>3</sup> (%)	31%	27%	16%	16%	17%	19%	22%	-1.3%	-5.1%	0.0%	0.7%	1.1%	1.5%
<b>Industry (incl. non-energy use)</b>	<b>325</b>	<b>425</b>	<b>1 123</b>	<b>1 573</b>	<b>1 856</b>	<b>1 839</b>	<b>1 688</b>	<b>2.7%</b>	<b>10.2%</b>	<b>3.4%</b>	<b>1.7%</b>	<b>-0.1%</b>	<b>-0.9%</b>
Coal	238	269	708	818	850	700	554	1.2%	10.2%	1.5%	0.4%	-1.9%	-2.3%
Oil	39	70	142	227	225	191	138	6.0%	7.4%	4.8%	-0.1%	-1.6%	-3.2%
Gas	8	9	28	77	131	171	167	1.2%	12.3%	10.8%	5.5%	2.7%	-0.2%
Electricity	30	59	203	390	562	660	696	7.2%	13.1%	6.7%	3.7%	1.6%	0.5%
Heat	11	19	42	59	71	82	88	5.9%	8.2%	3.4%	2.0%	1.4%	0.7%
Biomass & Other	0	0	0	2	16	35	44	n.s.	n.s.	n.s.	24.1%	8.2%	2.3%
<b>Buildings</b>	<b>325</b>	<b>321</b>	<b>452</b>	<b>603</b>	<b>693</b>	<b>779</b>	<b>822</b>	<b>-0.1%</b>	<b>3.5%</b>	<b>2.9%</b>	<b>1.4%</b>	<b>1.2%</b>	<b>0.5%</b>
Coal	105	61	81	73	59	50	42	-5.3%	2.9%	-1.1%	-2.0%	-1.6%	-1.9%
Oil	7	19	33	62	66	67	63	10.9%	5.5%	6.4%	0.8%	0.0%	-0.5%
Gas	2	6	26	52	75	91	97	11.4%	15.9%	7.1%	3.7%	1.9%	0.7%
Electricity	8	24	82	161	234	315	379	12.2%	13.1%	7.0%	3.8%	3.0%	1.9%
Heat	3	9	31	56	68	93	109	13.4%	13.2%	6.1%	2.1%	3.1%	1.7%
Biomass & Other	200	202	199	200	189	164	132	0.1%	-0.2%	0.1%	-0.5%	-1.4%	-2.1%
<b>Agriculture</b>	<b>30</b>	<b>18</b>	<b>34</b>	<b>40</b>	<b>43</b>	<b>45</b>	<b>45</b>	<b>-4.8%</b>	<b>6.2%</b>	<b>1.7%</b>	<b>0.8%</b>	<b>0.4%</b>	<b>0.0%</b>
Coal	11	6	11	11	10	9	8	-6.8%	7.0%	-0.1%	-1.0%	-1.0%	-1.0%
Oil	15	8	14	19	22	24	24	-5.8%	5.6%	2.9%	1.4%	0.8%	0.3%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	5.4%	1.9%	1.3%	0.8%
Electricity	4	5	8	10	11	12	13	2.2%	6.2%	1.6%	1.4%	0.8%	0.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>35</b>	<b>89</b>	<b>209</b>	<b>386</b>	<b>503</b>	<b>596</b>	<b>626</b>	<b>9.7%</b>	<b>8.9%</b>	<b>6.3%</b>	<b>2.7%</b>	<b>1.7%</b>	<b>0.5%</b>
Coal	11	5	3	3	2	2	1	-7.8%	-3.5%	-2.5%	-2.0%	-2.0%	-2.0%
Oil	24	83	194	360	462	534	539	13.2%	8.9%	6.4%	2.5%	1.5%	0.1%
Gas	0	0	7	13	13	16	21	n.s.	48.8%	5.8%	0.3%	1.9%	3.1%
Electricity	1	1	3	7	16	25	32	9.6%	10.3%	8.0%	7.9%	4.5%	2.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	2	3	9	19	33	n.s.	n.s.	6.7%	11.4%	7.7%	5.3%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>59</b>	<b>120</b>	<b>288</b>	<b>473</b>	<b>589</b>	<b>624</b>	<b>612</b>	<b>7.3%</b>	<b>9.2%</b>	<b>5.1%</b>	<b>2.2%</b>	<b>0.6%</b>	<b>-0.2%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

India	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	871	1 053	1 231	1 389	1 528	1 634	1 705	1.9%	1.6%	1.2%	1.0%	0.7%	0.4%
GDP per capita (ppp, k\$'05)	1	2	3	5	9	14	20	3.6%	5.9%	5.5%	5.7%	4.4%	3.5%
GDP per capita (mer, k\$'05)	0	1	1	2	3	5	7	3.6%	5.9%	5.8%	5.7%	4.4%	3.5%
Share Value Added - Agriculture (%)	29	23	18	15	13	12	12	-2.3%	-2.4%	-2.0%	-1.2%	-0.6%	-0.3%
Share Value Added - Industry (%)	26	26	28	26	23	20	16	-0.2%	0.6%	-0.7%	-1.0%	-1.7%	-2.1%
Share Value Added - Services (%)	44	51	54	60	64	68	72	1.4%	0.7%	0.9%	0.7%	0.7%	0.6%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	23	26	-7.8%	10.3%	-2.2%	1.8%	1.8%	1.2%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	28	24	47	43	48	69	93	-1.2%	6.8%	-1.0%	1.1%	3.7%	3.1%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	1 243	1 641	2 387	3 617	5 136	6 495	7 433	2.8%	3.8%	4.2%	3.6%	2.4%	1.4%
Total GHG (excl. sinks)	1 272	1 690	2 515	3 716	5 210	6 559	7 505	2.9%	4.1%	4.0%	3.4%	2.3%	1.4%
Total GHG (energy, industry, agriculture)	1 272	1 690	2 515	3 716	5 206	6 556	7 505	2.9%	4.1%	4.0%	3.4%	2.3%	1.4%
CO <sub>2</sub>	589	936	1 662	2 708	4 030	5 218	6 034	4.7%	5.9%	5.0%	4.1%	2.6%	1.5%
CH <sub>4</sub>	507	555	615	712	813	910	989	0.9%	1.0%	1.5%	1.3%	1.1%	0.8%
N <sub>2</sub> O	166	188	220	263	305	345	379	1.3%	1.5%	1.8%	1.5%	1.2%	0.9%
F gases	10	10	18	33	58	83	103	0.6%	5.8%	6.2%	5.9%	3.7%	2.1%
Total GHG from Energy and Industry	791	1 172	1 974	3 115	4 547	5 843	6 733	4.0%	5.3%	4.7%	3.9%	2.5%	1.4%
CO <sub>2</sub> Emissions from Fuel Comb.	545	873	1 494	2 399	3 511	4 563	5 355	4.8%	5.5%	4.9%	3.9%	2.7%	1.6%
Power generation/District heating	233	462	792	1 200	1 852	2 580	3 278	7.1%	5.5%	4.2%	4.4%	3.4%	2.4%
Industry	126	151	296	558	772	889	883	1.8%	7.0%	6.5%	3.3%	1.4%	-0.1%
Buildings	75	97	157	220	302	363	373	2.5%	5.0%	3.5%	3.2%	1.8%	0.3%
Agriculture	14	26	27	38	47	54	61	6.6%	0.5%	3.5%	2.1%	1.5%	1.1%
Transport	74	96	164	285	382	470	518	2.6%	5.5%	5.7%	3.0%	2.1%	1.0%
Other	23	42	58	97	156	207	242	6.2%	3.3%	5.2%	4.8%	2.9%	1.6%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	13.4%	10.8%	0.1%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	13.4%	10.8%	0.1%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	13.5%	10.6%	0.0%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	13.4%	11.0%	0.1%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	278	356	502	642	742	896	1 025	2.5%	3.5%	2.5%	1.5%	1.9%	1.4%
Coal	92	142	223	322	407	523	603	4.5%	4.6%	3.8%	2.4%	2.5%	1.4%
Oil	35	36	44	36	34	30	22	0.2%	2.0%	-1.9%	-0.6%	-1.2%	-3.0%
Natural gas	10	22	42	48	40	32	27	8.1%	6.8%	1.3%	-1.9%	-2.0%	-2.0%
Biomass	133	145	173	188	186	188	187	0.8%	1.8%	0.8%	-0.1%	0.1%	0.0%
Nuclear <sup>1</sup>	2	4	7	9	15	28	47	10.7%	4.4%	3.3%	4.7%	6.5%	5.3%
Hydro	6	6	11	15	18	18	19	0.4%	5.2%	3.7%	1.5%	0.3%	0.3%
Other renewables	0	0	3	23	43	77	120	32.6%	31.4%	23.8%	6.4%	5.8%	4.6%
Net Imports	32	83	191	429	751	982	1 121						
Coal	8	6	60	138	218	245	304						
Oil	23	76	118	225	286	328	339						
Natural gas	1	1	12	65	246	408	475						
Biomass	0	0	0	0	0	-4	-4						
Biofuels	0	0	0	0	1	3	6						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	311	440	693	1 071	1 493	1 878	2 146	3.5%	4.7%	4.4%	3.4%	2.3%	1.3%
Coal	100	148	283	461	625	768	907	4.0%	6.7%	5.0%	3.1%	2.1%	1.7%
Oil	59	112	162	261	320	358	362	6.7%	3.7%	4.9%	2.1%	1.1%	0.1%
Natural gas	11	23	54	113	285	441	502	7.9%	9.0%	7.6%	9.7%	4.4%	1.3%
Biomass	133	145	173	188	186	184	183	0.8%	1.8%	0.8%	-0.1%	-0.1%	-0.1%
Nuclear <sup>1</sup>	2	4	7	9	15	28	47	10.7%	4.4%	3.3%	4.7%	6.5%	5.3%
Hydro	6	6	11	15	18	18	19	0.4%	5.2%	3.7%	1.5%	0.3%	0.3%
Other renewables	0	0	3	23	43	77	120	32.6%	31.4%	23.8%	6.4%	5.8%	4.6%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	311	440	693	1 071	1 493	1 878	2 146	3.5%	4.7%	4.4%	3.4%	2.3%	1.3%
Energy for Power Generation	69	134	240	388	620	882	1 141	6.9%	6.0%	4.9%	4.8%	3.6%	2.6%
Other Energy Transformation & Losses	8	17	33	52	85	118	147	7.4%	6.8%	4.6%	5.2%	3.3%	2.2%
Final consumption	252	321	483	751	993	1 192	1 293	2.5%	4.2%	4.5%	2.8%	1.8%	0.8%
Steel, Non-Met. Minerals and Chem.	24	38	72	166	221	228	195	4.5%	6.6%	8.8%	2.9%	0.3%	-1.5%
Other Industry	47	49	86	133	194	243	259	0.3%	5.8%	4.5%	3.9%	2.3%	0.6%
Non-Energy Use	14	30	37	58	75	87	88	7.7%	2.3%	4.6%	2.5%	1.5%	0.1%
Residential	123	141	172	202	217	238	253	1.4%	2.0%	1.6%	0.8%	0.9%	0.6%
Services	14	16	33	49	89	142	199	1.6%	7.1%	4.1%	6.2%	4.8%	3.4%
Agriculture	9	15	19	30	37	44	50	6.0%	2.3%	4.4%	2.3%	1.7%	1.3%
Road	16	28	58	103	143	184	213	6.2%	7.4%	5.9%	3.4%	2.5%	1.5%
Rail	4	2	4	5	8	12	16	-6.1%	5.0%	4.2%	4.2%	3.7%	3.0%
Aviation	1	1	2	3	6	11	15	3.0%	8.5%	7.2%	6.9%	5.2%	3.7%
Other Transport	1	1	1	1	2	3	4	-0.5%	4.4%	2.6%	6.1%	4.1%	3.0%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

India	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>61</b>	<b>122</b>	<b>220</b>	<b>340</b>	<b>544</b>	<b>759</b>	<b>954</b>	<b>7.2%</b>	<b>6.0%</b>	<b>4.5%</b>	<b>4.8%</b>	<b>3.4%</b>	<b>2.3%</b>
Coal	52	104	177	269	389	528	683	7.0%	5.5%	4.3%	3.7%	3.1%	2.6%
Oil	5	9	7	11	17	21	21	6.0%	-1.9%	3.8%	4.7%	1.9%	0.4%
Gas	3	9	27	40	107	176	210	10.3%	11.1%	4.2%	10.3%	5.2%	1.7%
Biomass & Waste	0	1	8	20	31	34	40	n.s.	27.3%	9.3%	4.5%	1.0%	1.6%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>293</b>	<b>570</b>	<b>988</b>	<b>1 824</b>	<b>3 004</b>	<b>4 385</b>	<b>5 724</b>	<b>6.9%</b>	<b>5.7%</b>	<b>6.3%</b>	<b>5.1%</b>	<b>3.9%</b>	<b>2.7%</b>
Coal	192	390	658	1 054	1 611	2 285	3 027	7.4%	5.4%	4.8%	4.3%	3.6%	2.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	13	29	24	46	72	88	93	8.2%	-1.8%	6.6%	4.6%	2.0%	0.5%
Gas	10	56	113	182	486	820	1 001	18.8%	7.3%	4.9%	10.3%	5.4%	2.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	1	15	62	99	126	177	n.s.	27.6%	15.5%	4.9%	2.4%	3.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	6	17	26	36	59	113	194	10.7%	4.5%	3.3%	4.9%	6.8%	5.5%
Hydro	72	74	123	177	205	212	217	0.4%	5.2%	3.7%	1.5%	0.3%	0.3%
Wind	0	2	29	164	206	374	528	48.6%	32.8%	19.1%	2.3%	6.1%	3.5%
Solar	0	0	0	104	264	363	475	8.8%	31.7%	n.s.	9.8%	3.2%	2.7%
Other	0	0	0	0	1	4	12	n.s.	n.s.	n.s.	33.1%	18.4%	12.2%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>78</b>	<b>123</b>	<b>215</b>	<b>486</b>	<b>752</b>	<b>1 069</b>	<b>1 402</b>	<b>4.6%</b>	<b>5.8%</b>	<b>8.5%</b>	<b>4.5%</b>	<b>3.6%</b>	<b>2.8%</b>
Coal	52	79	131	221	306	412	540	4.3%	5.2%	5.4%	3.3%	3.0%	2.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	5	5	10	12	14	16	5.9%	-1.2%	7.6%	2.0%	1.7%	1.1%
Gas	3	10	21	45	86	149	201	11.4%	7.5%	7.8%	6.8%	5.6%	3.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	1	3	13	15	18	25	n.s.	14.6%	14.8%	0.9%	1.8%	3.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	1	3	4	5	8	16	27	8.2%	4.9%	2.4%	4.7%	6.6%	5.3%
Hydro	19	24	37	53	62	64	66	2.3%	4.7%	3.6%	1.6%	0.3%	0.2%
Wind	0	1	13	70	88	156	216	44.9%	27.1%	18.0%	2.3%	5.9%	3.3%
Solar	0	0	0	69	176	240	311	8.8%	22.2%	n.s.	9.9%	3.1%	2.6%
Other	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	32.2%	17.8%	11.7%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>252</b>	<b>321</b>	<b>483</b>	<b>751</b>	<b>993</b>	<b>1 192</b>	<b>1 293</b>	<b>2.5%</b>	<b>4.2%</b>	<b>4.5%</b>	<b>2.8%</b>	<b>1.8%</b>	<b>0.8%</b>
Coal	44	41	99	176	213	216	198	-0.8%	9.4%	5.9%	1.9%	0.1%	-0.8%
Oil	50	94	134	224	273	305	307	6.6%	3.6%	5.3%	2.0%	1.1%	0.1%
Gas	6	10	22	63	153	223	240	5.1%	8.6%	11.0%	9.4%	3.8%	0.8%
Electricity	18	32	62	119	197	287	375	5.8%	6.8%	6.6%	5.2%	3.8%	2.7%
Heat	0	0	0	0	3	13	34	16.5%	23.5%	5.1%	20.0%	16.1%	9.8%
Biomass & Other	133	144	165	168	154	148	138	0.8%	1.3%	0.2%	-0.9%	-0.4%	-0.7%
Share of Renewables <sup>3</sup> (%)	57%	49%	38%	29%	23%	21%	23%	-1.5%	-2.5%	-2.8%	-2.3%	-0.6%	0.6%
<b>Industry (incl. non-energy use)</b>	<b>86</b>	<b>116</b>	<b>194</b>	<b>357</b>	<b>490</b>	<b>558</b>	<b>543</b>	<b>3.1%</b>	<b>5.3%</b>	<b>6.3%</b>	<b>3.2%</b>	<b>1.3%</b>	<b>-0.3%</b>
Coal	32	32	84	160	194	194	176	0.0%	10.1%	6.7%	2.0%	0.0%	-0.9%
Oil	17	36	37	65	73	71	60	8.1%	0.2%	5.8%	1.2%	-0.2%	-1.7%
Gas	6	9	17	48	110	156	162	4.8%	6.6%	10.8%	8.6%	3.5%	0.4%
Electricity	9	14	28	49	73	94	106	4.1%	7.3%	6.0%	4.0%	2.6%	1.2%
Heat	0	0	0	0	0	0	0	n.s.	23.5%	3.9%	-0.2%	-0.3%	-0.2%
Biomass & Other	23	26	29	35	40	43	39	1.3%	1.3%	2.0%	1.3%	0.7%	-1.1%
<b>Buildings</b>	<b>137</b>	<b>158</b>	<b>205</b>	<b>251</b>	<b>306</b>	<b>380</b>	<b>452</b>	<b>1.4%</b>	<b>2.6%</b>	<b>2.0%</b>	<b>2.0%</b>	<b>2.2%</b>	<b>1.7%</b>
Coal	10	9	16	17	20	22	22	-1.4%	5.9%	0.6%	1.7%	1.4%	0.0%
Oil	11	19	27	39	42	43	40	5.7%	3.6%	3.7%	0.7%	0.2%	-0.6%
Gas	0	0	3	13	39	59	67	21.0%	27.7%	14.8%	11.8%	4.3%	1.3%
Electricity	5	11	23	49	94	151	214	8.5%	7.8%	7.9%	6.8%	4.8%	3.6%
Heat	0	0	0	0	3	13	34	16.5%	23.5%	5.2%	20.6%	16.2%	9.9%
Biomass & Other	111	119	136	132	109	92	74	0.7%	1.3%	-0.2%	-2.0%	-1.7%	-2.1%
<b>Agriculture</b>	<b>9</b>	<b>15</b>	<b>19</b>	<b>30</b>	<b>37</b>	<b>44</b>	<b>50</b>	<b>6.0%</b>	<b>2.3%</b>	<b>4.4%</b>	<b>2.3%</b>	<b>1.7%</b>	<b>1.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	4	8	8	12	15	17	19	6.6%	0.4%	3.6%	2.1%	1.5%	1.1%
Gas	0	0	0	0	0	0	0	5.4%	2.7%	1.6%	1.9%	1.3%	0.9%
Electricity	4	7	11	18	23	27	31	5.3%	4.1%	5.1%	2.4%	1.8%	1.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>21</b>	<b>32</b>	<b>64</b>	<b>113</b>	<b>160</b>	<b>209</b>	<b>249</b>	<b>4.4%</b>	<b>7.2%</b>	<b>5.8%</b>	<b>3.6%</b>	<b>2.7%</b>	<b>1.7%</b>
Coal	2	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	18	31	62	108	144	174	188	5.5%	7.1%	5.8%	2.8%	1.9%	0.8%
Gas	0	0	1	1	4	7	11	n.s.	33.6%	-0.6%	11.1%	6.5%	4.5%
Electricity	0	1	1	3	8	15	24	7.2%	5.0%	8.8%	11.1%	7.2%	4.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	5	13	25	n.s.	-0.7%	19.8%	28.6%	10.0%	6.9%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>8</b>	<b>17</b>	<b>33</b>	<b>52</b>	<b>85</b>	<b>118</b>	<b>147</b>	<b>7.4%</b>	<b>6.8%</b>	<b>4.6%</b>	<b>5.2%</b>	<b>3.3%</b>	<b>2.2%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Indonesia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	181	212	242	272	295	312	322	1.5%	1.3%	1.2%	0.8%	0.6%	0.3%
GDP per capita (ppp, k\$'05)	2	3	4	6	9	13	18	2.6%	3.8%	4.4%	4.4%	3.5%	3.2%
GDP per capita (mer, k\$'05)	1	1	2	2	4	5	7	2.6%	3.8%	4.3%	4.4%	3.5%	3.2%
Share Value Added - Agriculture (%)	19	16	15	13	11	11	10	-2.2%	-0.2%	-1.9%	-1.2%	-0.6%	-0.4%
Share Value Added - Industry (%)	39	46	47	47	46	44	40	1.6%	0.2%	0.1%	-0.2%	-0.5%	-0.8%
Share Value Added - Services (%)	41	38	38	40	42	46	49	-0.7%	-0.2%	0.6%	0.6%	0.7%	0.8%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	23	26	-7.8%	10.3%	-2.2%	1.8%	1.8%	1.2%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	28	24	47	43	48	69	93	-1.2%	6.8%	-1.0%	1.1%	3.7%	3.1%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	1 008	1 338	1 927	1 934	1 727	1 959	2 101	2.9%	3.7%	0.0%	-1.1%	1.3%	0.7%
Total GHG (excl. sinks)	1 344	1 585	1 927	1 934	1 727	1 959	2 101	1.7%	2.0%	0.0%	-1.1%	1.3%	0.7%
Total GHG (energy, industry, agriculture)	388	524	709	914	1 117	1 346	1 499	3.1%	3.1%	2.6%	2.0%	1.9%	1.1%
CO <sub>2</sub>	169	304	422	567	741	940	1 072	6.0%	3.3%	3.0%	2.7%	2.4%	1.3%
CH <sub>4</sub>	141	158	214	255	267	279	285	1.1%	3.1%	1.8%	0.5%	0.4%	0.2%
N <sub>2</sub> O	76	62	73	90	104	119	131	-2.0%	1.5%	2.1%	1.5%	1.3%	0.9%
F gases	2	0	1	2	4	8	11	-12.9%	6.3%	9.2%	8.7%	5.8%	3.9%
Total GHG from Energy and Industry	259	398	556	738	920	1 128	1 265	4.4%	3.4%	2.9%	2.2%	2.1%	1.2%
CO <sub>2</sub> Emissions from Fuel Comb.	149	278	390	522	677	861	982	6.5%	3.5%	2.9%	2.6%	2.4%	1.3%
Power generation/District heating	22	61	122	165	190	246	285	10.7%	7.1%	3.1%	1.4%	2.6%	1.5%
Industry	39	72	102	130	200	256	279	6.3%	3.6%	2.4%	4.5%	2.5%	0.9%
Buildings	21	37	24	32	42	58	72	6.0%	-4.3%	2.8%	2.8%	3.3%	2.2%
Agriculture	3	8	9	9	11	14	16	9.3%	2.0%	0.0%	2.2%	1.7%	1.4%
Transport	32	64	92	143	162	189	210	7.0%	3.8%	4.5%	1.3%	1.5%	1.1%
Other	31	36	41	43	71	99	120	1.5%	1.2%	0.5%	5.2%	3.3%	2.0%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	38.4%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	38.5%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	39.3%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	162	232	378	494	340	262	216	3.7%	5.0%	2.7%	-3.7%	-2.6%	-1.9%
Coal	6	49	195	291	90	14	0	22.5%	14.9%	4.1%	-11.0%	-16.9%	n.s.
Oil	76	72	49	42	47	42	26	-0.6%	-3.7%	-1.6%	1.1%	-1.1%	-4.7%
Natural gas	36	57	71	80	106	98	68	4.6%	2.1%	1.2%	2.9%	-0.8%	-3.5%
Biomass	42	49	52	62	65	72	76	1.6%	0.6%	1.8%	0.4%	1.0%	0.5%
Nuclear <sup>1</sup>	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	n.s.	10.3%
Hydro	0	1	2	1	1	2	3	5.8%	5.7%	-1.3%	1.2%	3.0%	2.8%
Other renewables	1	4	8	18	30	34	41	15.8%	6.9%	8.2%	5.1%	1.3%	2.1%
Net Imports	- 65	- 82	- 177	- 231	2	158	264						
Coal	- 2	- 37	- 165	- 260	- 59	27	47						
Oil	- 42	- 14	21	47	51	68	89						
Natural gas	- 22	- 31	- 32	- 17	13	72	139						
Biomass	0	0	0	- 1	- 3	- 9	- 11						
Biofuels	0	0	0	- 1	- 1	- 1	- 1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	97	151	201	263	342	420	480	4.5%	2.9%	2.7%	2.6%	2.1%	1.4%
Coal	4	12	30	31	32	42	47	10.4%	9.8%	0.2%	0.2%	2.8%	1.2%
Oil	34	58	70	89	98	109	115	5.3%	1.9%	2.4%	1.0%	1.1%	0.5%
Natural gas	15	27	39	63	119	170	208	6.1%	3.9%	5.0%	6.5%	3.6%	2.0%
Biomass	42	49	52	62	62	63	65	1.6%	0.6%	1.7%	0.1%	0.1%	0.3%
Nuclear <sup>1</sup>	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	n.s.	10.3%
Hydro	0	1	2	1	1	2	3	5.8%	5.7%	-1.3%	1.2%	3.0%	2.8%
Other renewables	1	4	8	18	30	34	41	15.8%	6.9%	8.2%	5.1%	1.3%	2.1%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	97	151	201	263	342	420	480	4.5%	2.9%	2.7%	2.6%	2.1%	1.4%
Energy for Power Generation	8	24	46	72	97	122	148	11.7%	6.7%	4.5%	3.0%	2.3%	1.9%
Other Energy Transformation & Losses	12	13	19	10	22	36	48	0.5%	4.0%	-6.3%	8.6%	4.9%	3.1%
Final consumption	79	121	149	203	253	304	340	4.3%	2.1%	3.2%	2.2%	1.8%	1.1%
Steel, Non-Met. Minerals and Chem.	3	5	9	17	31	39	40	6.3%	5.9%	6.6%	6.0%	2.3%	0.2%
Other Industry	15	25	32	36	50	64	74	5.2%	2.3%	1.3%	3.2%	2.6%	1.4%
Non-Energy Use	7	10	8	14	18	21	22	2.9%	-1.4%	5.2%	2.5%	1.5%	0.4%
Residential	42	53	56	70	75	80	83	2.4%	0.6%	2.2%	0.7%	0.7%	0.4%
Services	1	4	5	8	12	20	30	13.2%	3.2%	4.6%	4.9%	4.9%	4.1%
Agriculture	1	2	3	3	4	4	5	9.3%	2.0%	0.0%	2.2%	1.7%	1.4%
Road	9	19	31	48	54	63	72	7.4%	4.9%	4.5%	1.1%	1.6%	1.3%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Aviation	0	1	2	4	5	6	8	7.4%	14.1%	4.8%	3.3%	2.7%	2.1%
Other Transport	1	2	2	3	4	5	6	7.9%	2.0%	4.6%	3.6%	2.1%	1.6%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%



Indonesia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>7</b>	<b>19</b>	<b>37</b>	<b>53</b>	<b>66</b>	<b>86</b>	<b>101</b>	<b>11.3%</b>	<b>6.7%</b>	<b>3.7%</b>	<b>2.2%</b>	<b>2.7%</b>	<b>1.7%</b>
Coal	2	8	19	26	25	32	35	13.7%	8.4%	3.4%	-0.6%	2.7%	0.9%
Oil	4	5	8	3	3	2	2	1.5%	6.3%	-9.5%	-1.8%	-1.4%	-0.5%
Gas	0	6	9	22	35	47	59	39.3%	4.1%	9.6%	5.1%	2.9%	2.2%
Biomass & Waste	0	0	0	0	0	1	2	n.s.	31.5%	14.4%	7.6%	9.1%	8.3%
Other	0	0	1	2	3	3	3	15.8%	6.8%	6.8%	5.3%	1.1%	1.5%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>33</b>	<b>93</b>	<b>170</b>	<b>274</b>	<b>375</b>	<b>503</b>	<b>646</b>	<b>11.1%</b>	<b>6.2%</b>	<b>4.9%</b>	<b>3.2%</b>	<b>3.0%</b>	<b>2.5%</b>
Coal	10	34	68	111	113	149	170	13.3%	7.2%	4.9%	0.2%	2.8%	1.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	15	18	34	13	11	10	9	1.8%	6.4%	-9.3%	-1.8%	-1.3%	-0.5%
Gas	1	26	40	92	169	241	317	42.9%	4.4%	8.7%	6.2%	3.6%	2.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	1	1	4	9	n.s.	31.5%	18.9%	10.0%	10.2%	9.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	4	9	n.s.	n.s.	n.s.	n.s.	n.s.	10.4%
Hydro	6	10	17	15	17	23	31	5.8%	5.7%	-1.3%	1.2%	3.0%	2.8%
Wind	0	0	0	22	28	29	39	n.s.	n.s.	n.s.	2.5%	0.5%	2.8%
Solar	0	0	0	2	5	11	23	n.s.	n.s.	n.s.	10.7%	6.9%	8.2%
Other	1	5	9	18	30	34	40	15.8%	6.8%	6.8%	5.3%	1.1%	1.7%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>13</b>	<b>25</b>	<b>34</b>	<b>70</b>	<b>92</b>	<b>112</b>	<b>146</b>	<b>6.9%</b>	<b>3.0%</b>	<b>7.5%</b>	<b>2.7%</b>	<b>2.0%</b>	<b>2.7%</b>
Coal	2	8	13	29	33	34	33	16.1%	5.4%	8.5%	1.3%	0.2%	-0.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	7	5	6	6	5	2	2	-4.6%	2.2%	1.2%	-2.3%	-9.7%	-0.5%
Gas	1	8	10	16	27	38	51	32.6%	2.1%	4.8%	5.1%	3.5%	3.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	0	1	n.s.	31.2%	1.5%	10.0%	10.3%	9.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	n.s.	10.2%
Hydro	3	4	4	5	7	13	21	2.9%	-1.2%	3.0%	3.0%	6.6%	4.9%
Wind	0	0	0	9	12	12	16	n.s.	n.s.	n.s.	2.4%	0.5%	2.8%
Solar	0	0	0	1	4	7	16	n.s.	n.s.	n.s.	10.8%	6.7%	8.1%
Other	0	0	1	3	4	5	5	9.9%	12.7%	7.8%	5.4%	0.9%	1.3%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>79</b>	<b>121</b>	<b>149</b>	<b>203</b>	<b>253</b>	<b>304</b>	<b>340</b>	<b>4.3%</b>	<b>2.1%</b>	<b>3.2%</b>	<b>2.2%</b>	<b>1.8%</b>	<b>1.1%</b>
Coal	2	5	8	6	9	11	13	8.1%	5.9%	-2.5%	3.0%	2.5%	1.9%
Oil	27	48	60	86	96	107	112	6.0%	2.3%	3.5%	1.1%	1.1%	0.5%
Gas	6	12	16	31	60	88	106	6.7%	3.2%	6.8%	7.0%	3.9%	1.8%
Electricity	2	7	13	21	28	38	48	10.8%	6.5%	4.9%	3.2%	3.0%	2.5%
Heat	0	0	0	0	1	1	3	n.s.	n.s.	n.s.	8.0%	5.0%	6.4%
Biomass & Other	42	49	51	60	60	59	58	1.6%	0.4%	1.5%	0.0%	-0.1%	-0.1%
Share of Renewables <sup>3</sup> (%)	59%	45%	38%	34%	28%	24%	23%	-2.6%	-1.7%	-1.2%	-1.7%	-1.5%	-0.4%
<b>Industry (incl. non-energy use)</b>	<b>25</b>	<b>40</b>	<b>50</b>	<b>68</b>	<b>99</b>	<b>124</b>	<b>136</b>	<b>4.7%</b>	<b>2.1%</b>	<b>3.2%</b>	<b>3.8%</b>	<b>2.3%</b>	<b>0.9%</b>
Coal	2	5	8	6	9	11	13	8.0%	5.9%	-2.5%	3.0%	2.5%	1.9%
Oil	9	13	15	20	25	27	25	3.8%	1.6%	3.1%	2.1%	0.7%	-0.8%
Gas	6	11	16	28	50	70	79	6.7%	3.2%	6.0%	6.1%	3.3%	1.3%
Electricity	1	3	4	7	9	12	14	8.9%	4.2%	4.8%	3.0%	2.2%	1.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	7	9	6	6	5	5	5	1.8%	-3.0%	-0.3%	-1.2%	-0.6%	-0.1%
<b>Buildings</b>	<b>43</b>	<b>56</b>	<b>61</b>	<b>77</b>	<b>87</b>	<b>100</b>	<b>113</b>	<b>2.8%</b>	<b>0.8%</b>	<b>2.4%</b>	<b>1.2%</b>	<b>1.4%</b>	<b>1.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	7	12	7	8	6	5	5	5.9%	-4.4%	0.8%	-2.4%	-1.7%	-1.3%
Gas	0	0	0	3	9	17	24	8.1%	14.4%	32.5%	13.9%	6.5%	3.5%
Electricity	1	4	8	13	18	25	33	12.6%	7.9%	4.9%	3.0%	3.2%	2.9%
Heat	0	0	0	0	1	1	3	n.s.	n.s.	n.s.	8.0%	5.0%	6.4%
Biomass & Other	35	41	45	53	53	51	48	1.6%	1.0%	1.6%	0.0%	-0.3%	-0.6%
<b>Agriculture</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>9.3%</b>	<b>2.0%</b>	<b>0.0%</b>	<b>2.2%</b>	<b>1.7%</b>	<b>1.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	2	3	3	4	4	5	9.3%	2.0%	0.0%	2.2%	1.7%	1.4%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>11</b>	<b>21</b>	<b>35</b>	<b>55</b>	<b>64</b>	<b>75</b>	<b>86</b>	<b>7.4%</b>	<b>5.1%</b>	<b>4.5%</b>	<b>1.4%</b>	<b>1.7%</b>	<b>1.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	11	21	35	54	61	70	77	7.4%	5.0%	4.4%	1.2%	1.4%	1.0%
Gas	0	0	0	0	1	1	2	n.s.	-6.6%	30.2%	18.0%	5.6%	5.1%
Electricity	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	56.1%	10.3%	5.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	2	3	5	n.s.	n.s.	15.3%	8.0%	5.8%	6.0%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>12</b>	<b>13</b>	<b>19</b>	<b>10</b>	<b>22</b>	<b>36</b>	<b>48</b>	<b>0.5%</b>	<b>4.0%</b>	<b>-6.3%</b>	<b>8.6%</b>	<b>4.9%</b>	<b>3.1%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Malaysia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	18	23	28	32	36	39	41	2.5%	1.8%	1.4%	1.1%	0.7%	0.5%
GDP per capita (ppp, k\$'05)	7	11	14	20	27	36	46	4.4%	2.7%	3.6%	3.3%	2.8%	2.5%
GDP per capita (mer, k\$'05)	3	5	6	9	12	17	21	4.4%	2.7%	3.6%	3.3%	2.8%	2.5%
Share Value Added - Agriculture (%)	14	9	10	10	9	9	9	-3.8%	1.1%	-0.5%	-0.3%	-0.2%	-0.1%
Share Value Added - Industry (%)	36	39	37	33	29	24	20	0.8%	-0.6%	-1.1%	-1.4%	-1.7%	-2.0%
Share Value Added - Services (%)	50	51	53	57	62	66	71	0.2%	0.2%	0.8%	0.8%	0.7%	0.6%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	23	26	-7.8%	10.3%	-2.2%	1.8%	1.8%	1.2%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	28	24	47	43	48	69	93	-1.2%	6.8%	-1.0%	1.1%	3.7%	3.1%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	- 153	- 51	408	487	531	578	606	n.s.	n.s.	1.8%	0.9%	0.8%	0.5%
Total GHG (excl. sinks)	127	217	408	487	531	578	606	5.5%	6.5%	1.8%	0.9%	0.8%	0.5%
Total GHG (energy, industry, agriculture)	91	171	262	340	388	434	465	6.4%	4.4%	2.7%	1.3%	1.1%	0.7%
CO <sub>2</sub>	64	133	215	279	324	373	405	7.6%	4.9%	2.6%	1.5%	1.4%	0.8%
CH <sub>4</sub>	18	28	33	43	43	37	34	4.4%	1.7%	2.8%	-0.1%	-1.4%	-0.9%
N <sub>2</sub> O	9	9	13	16	18	21	23	0.1%	3.3%	2.3%	1.4%	1.2%	0.9%
F gases	1	1	1	2	3	3	3	0.7%	7.1%	4.2%	2.8%	1.6%	0.2%
Total GHG from Energy and Industry	79	158	246	321	367	411	439	7.2%	4.5%	2.7%	1.3%	1.1%	0.7%
CO <sub>2</sub> Emissions from Fuel Comb.	59	122	196	253	293	339	370	7.6%	4.8%	2.6%	1.5%	1.5%	0.9%
Power generation/District heating	16	37	96	118	139	164	189	9.1%	9.9%	2.1%	1.7%	1.7%	1.5%
Industry	15	29	31	47	51	55	52	6.7%	0.9%	4.0%	1.0%	0.6%	-0.5%
Buildings	2	4	6	6	9	13	15	7.0%	3.6%	-0.5%	4.1%	3.4%	1.9%
Agriculture	0	0	3	4	4	5	6	n.s.	25.9%	0.7%	1.8%	1.4%	1.2%
Transport	15	31	40	52	55	62	66	7.9%	2.6%	2.5%	0.5%	1.2%	0.6%
Other	11	20	19	28	35	41	42	6.0%	-0.9%	4.0%	2.5%	1.6%	0.3%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	47	77	92	124	136	108	86	5.0%	1.8%	3.0%	0.9%	-2.3%	-2.2%
Coal	0	0	2	2	3	4	5	14.0%	19.6%	3.0%	2.6%	3.1%	3.1%
Oil	31	36	35	51	43	25	15	1.5%	-0.1%	3.7%	-1.6%	-5.2%	-5.3%
Natural gas	14	38	52	63	79	62	46	10.4%	3.0%	2.0%	2.3%	-2.4%	-2.9%
Biomass	1	2	2	6	9	13	14	1.8%	2.2%	11.1%	3.7%	3.8%	0.7%
Nuclear <sup>1</sup>	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	12.3%	9.0%
Hydro	0	1	1	1	1	1	2	5.7%	-0.7%	8.9%	0.4%	0.6%	0.7%
Other renewables	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	13.3%	9.5%	8.0%
Net Imports	- 25	- 28	- 16	- 25	- 20	28	62						
Coal	1	2	13	20	22	25	31						
Oil	- 18	- 16	- 9	- 16	- 8	11	22						
Natural gas	- 7	- 14	- 21	- 27	- 29	- 2	15						
Biomass	0	0	0	- 3	- 4	- 7	- 5						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	22	49	75	98	116	135	148	8.2%	4.4%	2.7%	1.7%	1.6%	0.9%
Coal	1	2	15	23	25	29	36	5.7%	20.3%	4.4%	1.0%	1.6%	2.1%
Oil	12	19	27	35	35	36	36	4.7%	3.3%	2.6%	0.0%	0.4%	0.0%
Natural gas	7	25	31	36	50	60	61	13.6%	2.4%	1.5%	3.2%	1.9%	0.2%
Biomass	1	2	2	4	5	7	9	1.8%	2.2%	5.5%	2.3%	3.2%	2.9%
Nuclear <sup>1</sup>	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	12.3%	9.0%
Hydro	0	1	1	1	1	1	2	5.7%	-0.7%	8.9%	0.4%	0.6%	0.7%
Other renewables	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	13.3%	9.5%	8.0%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	22	49	75	98	116	135	148	8.2%	4.4%	2.7%	1.7%	1.6%	0.9%
Energy for Power Generation	5	15	33	39	47	57	66	10.8%	8.0%	1.7%	2.0%	1.9%	1.5%
Other Energy Transformation & Losses	5	9	8	13	17	20	22	6.7%	-0.8%	4.5%	2.7%	1.9%	1.0%
Final consumption	14	30	44	61	71	82	89	8.0%	4.0%	3.3%	1.4%	1.5%	0.8%
Steel, Non-Met. Minerals and Chem.	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	16.3%	5.5%	1.4%
Other Industry	5	12	13	18	21	22	21	7.9%	1.3%	3.1%	1.3%	0.7%	-0.4%
Non-Energy Use	1	2	6	11	12	11	10	10.4%	11.0%	6.0%	0.3%	-0.1%	-1.0%
Residential	2	3	4	5	6	7	8	4.2%	3.5%	2.1%	1.6%	1.6%	1.1%
Services	1	2	4	6	9	14	19	10.9%	6.9%	3.2%	4.3%	4.3%	3.2%
Agriculture	0	0	1	1	1	2	2	n.s.	26.2%	0.9%	1.8%	1.5%	1.2%
Road	5	11	15	19	20	23	26	8.5%	3.3%	2.7%	0.7%	1.4%	1.1%
Rail	0	0	0	0	0	0	0	n.s.	15.1%	4.8%	3.2%	2.5%	2.0%
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other Transport	0	0	0	0	0	0	0	-20.8%	11.6%	-6.5%	2.8%	1.6%	1.1%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Malaysia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>5</b>	<b>15</b>	<b>32</b>	<b>37</b>	<b>45</b>	<b>54</b>	<b>60</b>	<b>11.1%</b>	<b>8.2%</b>	<b>1.5%</b>	<b>2.0%</b>	<b>1.8%</b>	<b>1.2%</b>
Coal	1	1	13	20	21	25	31	6.3%	24.1%	4.3%	0.8%	1.5%	2.2%
Oil	3	1	1	1	1	1	1	-10.6%	-2.5%	4.1%	-0.9%	1.9%	1.7%
Gas	1	12	18	15	22	26	26	24.4%	4.1%	-1.7%	3.6%	1.9%	0.1%
Biomass & Waste	0	0	0	1	1	1	2	n.s.	n.s.	10.9%	-0.2%	3.8%	1.3%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>23</b>	<b>69</b>	<b>125</b>	<b>181</b>	<b>235</b>	<b>297</b>	<b>355</b>	<b>11.6%</b>	<b>6.1%</b>	<b>3.8%</b>	<b>2.6%</b>	<b>2.4%</b>	<b>1.8%</b>
Coal	3	8	43	84	94	111	137	10.1%	18.7%	6.9%	1.2%	1.6%	2.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	11	4	4	5	4	5	6	-10.2%	0.2%	2.3%	-0.9%	1.9%	1.9%
Gas	6	51	71	73	109	138	142	24.9%	3.3%	0.3%	4.2%	2.4%	0.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	1	3	3	5	7	n.s.	n.s.	10.9%	-0.2%	6.2%	3.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	1	2	5	n.s.	n.s.	n.s.	n.s.	12.4%	9.1%
Hydro	4	7	6	15	16	17	18	5.7%	-0.7%	8.9%	0.4%	0.6%	0.7%
Wind	0	0	0	0	2	7	17	n.s.	n.s.	n.s.	17.7%	12.8%	9.0%
Solar	0	0	0	2	5	12	23	n.s.	n.s.	n.s.	12.0%	7.9%	7.3%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	26.7%	16.8%	11.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>5</b>	<b>14</b>	<b>27</b>	<b>41</b>	<b>49</b>	<b>60</b>	<b>77</b>	<b>11.4%</b>	<b>7.0%</b>	<b>4.3%</b>	<b>1.6%</b>	<b>2.1%</b>	<b>2.5%</b>
Coal	1	1	8	13	15	16	20	0.8%	19.4%	5.3%	1.4%	0.9%	2.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	2	2	2	1	1	1	4.7%	-3.6%	3.9%	-6.8%	-1.1%	1.9%
Gas	1	8	15	19	22	25	25	24.4%	6.6%	2.3%	1.5%	1.3%	0.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	1	1	0	1	1	n.s.	20.9%	-2.6%	-1.6%	5.2%	2.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	12.2%	8.9%
Hydro	1	2	2	5	6	6	6	6.6%	0.1%	9.7%	0.4%	0.6%	0.7%
Wind	0	0	0	0	1	3	7	n.s.	n.s.	n.s.	17.5%	12.6%	8.8%
Solar	0	0	0	1	4	8	16	n.s.	n.s.	n.s.	12.0%	7.9%	7.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.2%	11.0%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>14</b>	<b>30</b>	<b>44</b>	<b>61</b>	<b>71</b>	<b>82</b>	<b>89</b>	<b>8.0%</b>	<b>4.0%</b>	<b>3.3%</b>	<b>1.4%</b>	<b>1.5%</b>	<b>0.8%</b>
Coal	1	1	2	3	4	5	5	6.8%	6.3%	4.4%	2.5%	2.4%	1.7%
Oil	9	18	25	30	30	32	31	7.1%	3.2%	2.1%	0.0%	0.4%	-0.1%
Gas	1	4	6	12	16	19	19	13.5%	4.9%	6.5%	2.8%	1.9%	0.3%
Electricity	2	5	10	14	18	23	27	11.9%	6.1%	3.8%	2.6%	2.4%	1.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	15.9%
Biomass & Other	1	2	2	2	3	4	5	1.8%	-0.3%	3.3%	2.7%	2.6%	3.1%
Share of Renewables <sup>3</sup> (%)	13%	8%	6%	8%	9%	11%	15%	-5.0%	-3.2%	2.9%	1.3%	2.1%	3.3%
<b>Industry (incl. non-energy use)</b>	<b>6</b>	<b>14</b>	<b>20</b>	<b>30</b>	<b>34</b>	<b>36</b>	<b>34</b>	<b>8.2%</b>	<b>3.5%</b>	<b>4.2%</b>	<b>1.2%</b>	<b>0.6%</b>	<b>-0.5%</b>
Coal	1	1	2	3	4	5	5	6.8%	6.3%	4.4%	2.5%	2.4%	1.7%
Oil	4	6	7	9	8	7	6	5.1%	2.1%	2.4%	-1.0%	-1.5%	-2.4%
Gas	1	4	6	11	13	14	13	13.5%	4.5%	6.2%	1.8%	1.0%	-0.8%
Electricity	1	3	5	6	8	9	8	12.9%	4.9%	3.6%	2.1%	0.8%	-0.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	1	2.5%	n.s.	n.s.	10.1%	6.1%	3.1%
<b>Buildings</b>	<b>3</b>	<b>5</b>	<b>9</b>	<b>11</b>	<b>15</b>	<b>21</b>	<b>27</b>	<b>6.5%</b>	<b>5.1%</b>	<b>2.7%</b>	<b>3.1%</b>	<b>3.2%</b>	<b>2.5%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	2	1	1	1	1	7.0%	3.5%	-2.8%	-1.8%	-1.9%	-1.7%
Gas	0	0	0	1	2	4	5	7.4%	8.2%	31.8%	14.3%	6.3%	2.9%
Electricity	1	2	5	7	10	14	18	10.7%	7.3%	4.0%	3.0%	3.4%	2.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	15.9%
Biomass & Other	1	1	2	2	2	2	3	1.6%	1.8%	1.1%	0.8%	0.9%	1.0%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>n.s.</b>	<b>26.2%</b>	<b>0.9%</b>	<b>1.8%</b>	<b>1.5%</b>	<b>1.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	1	1	1	2	2	n.s.	25.9%	0.7%	1.8%	1.4%	1.2%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	n.s.	n.s.	5.2%	2.8%	2.5%	2.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>5</b>	<b>11</b>	<b>15</b>	<b>19</b>	<b>20</b>	<b>23</b>	<b>26</b>	<b>8.4%</b>	<b>3.3%</b>	<b>2.7%</b>	<b>0.7%</b>	<b>1.4%</b>	<b>1.1%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	5	10	14	18	19	22	23	8.4%	3.1%	2.6%	0.5%	1.2%	0.5%
Gas	0	0	0	0	0	0	1	n.s.	42.2%	1.5%	0.8%	2.5%	5.3%
Electricity	0	0	0	0	0	0	1	n.s.	15.1%	5.2%	17.9%	9.2%	5.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	2	n.s.	n.s.	50.7%	6.6%	5.0%	7.4%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>5</b>	<b>9</b>	<b>8</b>	<b>13</b>	<b>17</b>	<b>20</b>	<b>22</b>	<b>6.7%</b>	<b>-0.8%</b>	<b>4.5%</b>	<b>2.7%</b>	<b>1.9%</b>	<b>1.0%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Thailand	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	57	63	67	69	68	66	62	1.0%	0.6%	0.3%	0.0%	-0.3%	-0.6%
GDP per capita (ppp, k\$'05)	4	6	8	10	15	21	28	3.4%	3.7%	2.5%	3.7%	3.7%	3.0%
GDP per capita (mer, k\$'05)	2	2	3	4	6	8	11	3.4%	3.7%	2.5%	3.7%	3.7%	3.0%
Share Value Added - Agriculture (%)	14	9	10	10	9	9	9	-3.8%	1.1%	-0.6%	-0.6%	-0.4%	-0.2%
Share Value Added - Industry (%)	36	39	37	35	33	29	26	0.8%	-0.6%	-0.5%	-0.7%	-1.1%	-1.3%
Share Value Added - Services (%)	50	51	53	55	58	62	66	0.2%	0.2%	0.4%	0.5%	0.7%	0.6%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	23	26	-7.8%	10.3%	-2.2%	1.8%	1.8%	1.2%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	28	24	47	43	48	69	93	-1.2%	6.8%	-1.0%	1.1%	3.7%	3.1%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	206	278	376	466	548	643	697	3.0%	3.1%	2.2%	1.6%	1.6%	0.8%
Total GHG (excl. sinks)	206	284	394	471	552	654	716	3.2%	3.3%	1.8%	1.6%	1.7%	0.9%
Total GHG (energy, industry, agriculture)	188	268	378	466	547	639	694	3.6%	3.5%	2.1%	1.6%	1.6%	0.8%
CO <sub>2</sub>	89	169	260	336	404	483	530	6.6%	4.4%	2.6%	1.9%	1.8%	0.9%
CH <sub>4</sub>	82	81	97	106	115	125	131	0.0%	1.8%	0.9%	0.9%	0.8%	0.5%
N <sub>2</sub> O	16	16	20	24	27	31	33	0.2%	2.4%	1.8%	1.3%	1.1%	0.8%
F gases	1	1	0	1	1	1	1	-2.4%	-8.4%	1.0%	0.2%	1.0%	0.3%
Total GHG from Energy and Industry	117	203	303	386	459	544	593	5.6%	4.1%	2.4%	1.7%	1.7%	0.9%
CO <sub>2</sub> Emissions from Fuel Comb.	79	154	241	315	380	457	504	7.0%	4.6%	2.7%	1.9%	1.9%	1.0%
Power generation/District heating	27	53	81	84	96	128	166	7.1%	4.3%	0.3%	1.4%	2.9%	2.6%
Industry	13	31	61	92	119	132	126	9.6%	6.9%	4.2%	2.6%	1.0%	-0.4%
Buildings	3	5	8	11	15	21	25	6.0%	5.8%	3.0%	3.0%	3.2%	1.6%
Agriculture	6	9	11	13	16	18	20	4.5%	2.1%	2.0%	1.5%	1.4%	1.0%
Transport	27	44	60	86	95	109	113	4.9%	3.1%	3.7%	1.1%	1.4%	0.4%
Other	3	11	20	29	38	50	54	13.0%	6.1%	3.6%	2.8%	2.7%	0.9%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	33.8%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	33.5%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	22	42	73	67	58	52	52	6.7%	5.6%	-0.9%	-1.4%	-1.1%	-0.1%
Coal	4	6	6	6	7	10	14	4.5%	-0.1%	-0.5%	2.8%	2.9%	3.5%
Oil	3	9	19	15	6	2	0	11.5%	7.7%	-2.1%	-8.9%	-12.7%	-12.4%
Natural gas	5	17	30	23	19	14	9	11.9%	6.1%	-2.7%	-1.9%	-3.2%	-3.8%
Biomass	9	10	17	19	20	20	21	0.7%	5.8%	0.8%	0.8%	0.1%	0.4%
Nuclear <sup>1</sup>	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	12.6%	7.7%
Hydro	0	1	0	1	1	1	1	1.9%	-0.8%	1.9%	0.6%	0.5%	0.6%
Other renewables	0	0	0	3	5	5	5	n.s.	9.7%	n.s.	3.3%	1.1%	-1.4%
Net Imports	14	26	40	77	113	149	164						
Coal	0	2	11	16	17	18	22						
Oil	15	23	26	45	59	68	67						
Natural gas	0	1	3	16	36	62	74						
Biomass	0	0	0	0	0	-1	0						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	0	0	1	1	1	1						
Primary Energy Demand <sup>2</sup>	36	68	113	144	171	201	216	6.6%	5.3%	2.4%	1.7%	1.6%	0.7%
Coal	4	8	17	21	24	28	35	8.1%	8.0%	2.5%	1.4%	1.3%	2.4%
Oil	18	32	45	61	65	70	67	6.2%	3.5%	2.9%	0.7%	0.7%	-0.3%
Natural gas	5	17	33	39	55	76	84	13.3%	6.6%	1.6%	3.6%	3.2%	1.0%
Biomass	9	10	17	18	20	20	21	0.7%	5.8%	0.7%	0.7%	0.1%	0.5%
Nuclear <sup>1</sup>	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	12.6%	7.7%
Hydro	0	1	0	1	1	1	1	1.9%	-0.8%	1.9%	0.6%	0.5%	0.6%
Other renewables	0	0	0	3	5	5	5	n.s.	9.7%	n.s.	3.3%	1.1%	-1.4%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	36	68	113	144	171	201	216	6.6%	5.3%	2.4%	1.7%	1.6%	0.7%
Energy for Power Generation	9	20	33	34	41	53	65	8.1%	5.0%	0.5%	1.7%	2.7%	2.0%
Other Energy Transformation & Losses	1	5	10	14	20	26	30	14.1%	6.7%	3.3%	3.3%	2.8%	1.5%
Final consumption	28	50	84	112	131	149	153	5.8%	5.3%	3.0%	1.6%	1.3%	0.3%
Steel, Non-Met. Minerals and Chem.	2	6	12	18	24	26	25	10.4%	7.0%	4.3%	3.1%	0.9%	-0.6%
Other Industry	6	10	15	18	22	24	24	5.5%	3.6%	2.1%	1.9%	1.1%	-0.1%
Non-Energy Use	0	6	18	23	25	26	24	29.1%	12.3%	2.7%	0.7%	0.4%	-0.7%
Residential	8	8	11	14	15	16	16	0.1%	3.9%	2.5%	0.4%	0.6%	0.0%
Services	1	3	6	7	10	15	19	8.2%	6.1%	2.3%	3.3%	4.1%	2.8%
Agriculture	2	3	3	4	5	6	6	4.5%	2.1%	2.0%	1.5%	1.4%	1.0%
Road	9	15	19	28	31	36	39	5.4%	2.9%	3.6%	1.1%	1.6%	0.8%
Rail	0	0	0	0	0	0	0	-0.6%	-1.1%	1.2%	1.2%	1.3%	1.0%
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other Transport	0	0	0	0	0	0	0	-16.2%	2.7%	8.5%	2.0%	1.4%	0.5%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Thailand	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>9</b>	<b>20</b>	<b>32</b>	<b>30</b>	<b>35</b>	<b>46</b>	<b>57</b>	<b>8.3%</b>	<b>5.1%</b>	<b>-0.6%</b>	<b>1.4%</b>	<b>2.8%</b>	<b>2.3%</b>
Coal	3	4	7	10	12	16	23	5.0%	5.2%	3.9%	2.0%	2.6%	3.9%
Oil	2	2	0	0	1	1	2	-0.9%	-19.6%	4.1%	3.3%	10.9%	3.6%
Gas	4	13	23	18	19	25	28	12.8%	5.9%	-2.3%	0.7%	2.8%	1.1%
Biomass & Waste	0	0	2	2	3	3	4	n.s.	17.5%	-2.4%	4.0%	1.2%	1.7%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>44</b>	<b>96</b>	<b>160</b>	<b>194</b>	<b>235</b>	<b>302</b>	<b>355</b>	<b>8.1%</b>	<b>5.2%</b>	<b>2.0%</b>	<b>1.9%</b>	<b>2.5%</b>	<b>1.6%</b>
Coal	11	18	30	43	55	72	105	4.9%	5.4%	3.7%	2.4%	2.8%	3.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	10	10	1	2	2	6	9	-0.3%	-19.3%	2.8%	3.4%	11.2%	3.9%
Gas	18	62	119	98	106	140	158	13.2%	6.8%	-1.9%	0.8%	2.8%	1.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	1	3	5	8	10	13	n.s.	20.9%	3.1%	5.7%	2.3%	2.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	1	4	8	n.s.	n.s.	n.s.	n.s.	12.7%	7.8%
Hydro	5	6	6	7	7	7	8	1.9%	-0.8%	1.9%	0.6%	0.5%	0.6%
Wind	0	0	0	30	35	35	22	n.s.	n.s.	n.s.	1.6%	0.0%	-4.8%
Solar	0	0	0	10	20	26	32	n.s.	n.s.	n.s.	7.4%	2.6%	1.9%
Other	0	0	0	0	0	0	0	7.2%	0.5%	1.4%	29.1%	17.2%	12.1%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>10</b>	<b>27</b>	<b>41</b>	<b>65</b>	<b>76</b>	<b>84</b>	<b>88</b>	<b>10.9%</b>	<b>4.2%</b>	<b>4.7%</b>	<b>1.6%</b>	<b>1.0%</b>	<b>0.5%</b>
Coal	1	3	4	7	8	10	15	5.7%	4.3%	5.3%	2.5%	2.2%	3.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	6	10	6	4	2	3	7.0%	5.6%	-5.2%	-3.1%	-9.0%	4.2%
Gas	3	15	21	25	25	29	28	17.7%	3.4%	1.4%	0.2%	1.3%	0.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	1	1	2	2	2	n.s.	9.8%	3.7%	3.2%	-1.8%	1.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	12.5%	7.5%
Hydro	2	3	5	6	6	7	7	3.5%	3.9%	2.7%	0.5%	0.5%	0.6%
Wind	0	0	0	13	15	15	9	n.s.	n.s.	n.s.	1.5%	0.0%	-5.5%
Solar	0	0	0	7	15	19	23	n.s.	n.s.	n.s.	7.4%	2.6%	1.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.6%	11.6%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>28</b>	<b>50</b>	<b>84</b>	<b>112</b>	<b>131</b>	<b>149</b>	<b>153</b>	<b>5.8%</b>	<b>5.3%</b>	<b>3.0%</b>	<b>1.6%</b>	<b>1.3%</b>	<b>0.3%</b>
Coal	1	3	9	11	11	11	11	12.4%	11.3%	1.9%	0.6%	-0.1%	0.0%
Oil	15	29	43	58	62	65	62	6.8%	4.1%	3.0%	0.7%	0.5%	-0.5%
Gas	0	1	5	12	23	33	36	23.1%	15.2%	10.4%	6.7%	3.5%	0.9%
Electricity	3	8	13	16	19	24	29	8.7%	5.4%	2.2%	1.9%	2.4%	1.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	11.6%
Biomass & Other	9	9	14	16	16	15	15	0.2%	4.4%	0.9%	-0.2%	-0.3%	0.1%
Share of Renewables <sup>3</sup> (%)	32%	21%	21%	21%	20%	18%	18%	-4.2%	0.3%	-0.1%	-0.8%	-0.9%	0.0%
<b>Industry (incl. non-energy use)</b>	<b>9</b>	<b>22</b>	<b>44</b>	<b>59</b>	<b>70</b>	<b>76</b>	<b>72</b>	<b>9.7%</b>	<b>7.3%</b>	<b>3.0%</b>	<b>1.8%</b>	<b>0.8%</b>	<b>-0.5%</b>
Coal	1	3	9	11	11	11	11	12.4%	11.3%	1.9%	0.6%	-0.1%	0.0%
Oil	3	10	19	25	26	25	21	12.3%	7.2%	2.7%	0.3%	-0.5%	-1.8%
Gas	0	1	3	9	19	25	26	23.1%	10.9%	11.6%	7.1%	3.1%	0.3%
Electricity	2	3	5	7	8	9	9	8.4%	4.7%	2.2%	1.6%	1.1%	-0.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	3	4	7	7	6	6	6	4.0%	5.0%	-0.6%	-0.3%	-0.6%	-0.4%
<b>Buildings</b>	<b>9</b>	<b>11</b>	<b>17</b>	<b>21</b>	<b>25</b>	<b>30</b>	<b>35</b>	<b>1.9%</b>	<b>4.6%</b>	<b>2.4%</b>	<b>1.5%</b>	<b>2.1%</b>	<b>1.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	2	3	3	2	2	1	6.0%	5.8%	0.6%	-2.9%	-2.4%	-2.4%
Gas	0	0	0	1	4	7	9	n.s.	n.s.	n.s.	13.6%	6.2%	2.6%
Electricity	2	4	7	9	11	15	19	8.9%	6.0%	2.2%	1.9%	3.1%	2.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	11.6%
Biomass & Other	6	5	7	8	8	7	6	-2.1%	2.9%	2.1%	-0.7%	-1.0%	-1.1%
<b>Agriculture</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>4.5%</b>	<b>2.1%</b>	<b>2.0%</b>	<b>1.5%</b>	<b>1.4%</b>	<b>1.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	3	3	4	5	6	6	4.5%	2.1%	2.0%	1.5%	1.4%	1.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	4.8%	8.1%	3.4%	2.5%	2.4%	2.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>9</b>	<b>15</b>	<b>20</b>	<b>28</b>	<b>31</b>	<b>37</b>	<b>40</b>	<b>4.9%</b>	<b>2.9%</b>	<b>3.6%</b>	<b>1.1%</b>	<b>1.6%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	9	15	17	25	29	33	34	4.9%	1.7%	3.7%	1.3%	1.4%	0.3%
Gas	0	0	1	2	1	1	1	n.s.	n.s.	2.4%	-5.7%	-1.4%	3.2%
Electricity	0	0	0	0	0	1	1	n.s.	6.6%	13.8%	23.1%	11.7%	6.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	1	1	1	2	3	n.s.	n.s.	3.4%	4.3%	3.6%	4.5%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>1</b>	<b>5</b>	<b>10</b>	<b>14</b>	<b>20</b>	<b>26</b>	<b>30</b>	<b>14.1%</b>	<b>6.7%</b>	<b>3.3%</b>	<b>3.3%</b>	<b>2.8%</b>	<b>1.5%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Vietnam	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	68	80	88	98	105	110	113	1.6%	1.0%	1.1%	0.7%	0.4%	0.3%
GDP per capita (ppp, k\$'05)	1	2	3	5	8	12	16	5.8%	5.6%	5.0%	4.8%	4.1%	3.3%
GDP per capita (mer, k\$'05)	0	1	1	1	2	3	5	5.8%	5.6%	5.0%	4.8%	4.1%	3.3%
Share Value Added - Agriculture (%)	14	9	10	8	7	6	6	-3.8%	1.1%	-2.2%	-1.5%	-0.9%	-0.5%
Share Value Added - Industry (%)	36	39	37	37	37	35	33	0.8%	-0.6%	0.1%	-0.1%	-0.5%	-0.7%
Share Value Added - Services (%)	50	51	53	54	56	58	61	0.2%	0.2%	0.3%	0.3%	0.4%	0.5%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	23	26	-7.8%	10.3%	-2.2%	1.8%	1.8%	1.2%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	28	24	47	43	48	69	93	-1.2%	6.8%	-1.0%	1.1%	3.7%	3.1%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	112	100	275	421	533	647	727	-1.1%	10.6%	4.4%	2.4%	1.9%	1.2%
Total GHG (excl. sinks)	112	144	290	433	549	669	756	2.6%	7.3%	4.1%	2.4%	2.0%	1.2%
Total GHG (energy, industry, agriculture)	89	144	289	433	546	657	737	4.9%	7.2%	4.1%	2.3%	1.9%	1.2%
CO <sub>2</sub>	20	52	149	268	374	466	530	10.0%	11.1%	6.0%	3.4%	2.2%	1.3%
CH <sub>4</sub>	59	74	109	119	119	130	140	2.3%	4.0%	0.9%	-0.1%	0.9%	0.7%
N <sub>2</sub> O	10	18	31	46	54	61	67	5.7%	5.4%	4.0%	1.6%	1.3%	0.9%
F gases	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Total GHG from Energy and Industry	36	78	205	320	420	520	591	8.2%	10.1%	4.5%	2.8%	2.1%	1.3%
CO <sub>2</sub> Emissions from Fuel Comb.	17	44	126	223	303	380	436	9.9%	11.1%	5.9%	3.1%	2.3%	1.4%
Power generation/District heating	5	11	41	90	129	168	201	9.1%	13.7%	8.2%	3.7%	2.7%	1.8%
Industry	6	14	42	73	98	111	116	9.9%	11.4%	5.8%	2.9%	1.3%	0.4%
Buildings	2	7	11	13	17	23	26	13.0%	5.4%	1.1%	3.2%	2.7%	1.5%
Agriculture	1	1	2	2	3	3	4	5.0%	3.8%	1.8%	2.3%	1.8%	1.4%
Transport	4	11	28	41	52	69	81	9.8%	10.4%	3.8%	2.4%	2.8%	1.7%
Other	0	0	1	4	5	6	8	-0.7%	53.3%	9.9%	2.3%	2.7%	2.4%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	18	40	66	65	56	61	67	8.3%	5.2%	-0.1%	-1.5%	1.0%	0.9%
Coal	3	7	26	14	0	0	0	10.0%	14.2%	-5.9%	n.s.	n.s.	n.s.
Oil	3	17	15	18	17	16	15	19.9%	-0.7%	1.4%	-0.1%	-0.7%	-1.1%
Natural gas	0	1	8	11	14	19	22	44.5%	19.4%	3.5%	2.8%	2.6%	1.7%
Biomass	12	13	14	15	16	17	18	1.2%	0.3%	1.0%	0.5%	0.5%	0.8%
Nuclear <sup>1</sup>	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	11.7%	8.2%
Hydro	0	1	2	5	5	5	5	10.5%	6.6%	7.8%	0.1%	0.2%	0.1%
Other renewables	0	0	0	2	2	3	5	n.s.	n.s.	n.s.	3.3%	4.0%	3.8%
Net Imports	0	-12	-8	24	61	83	98						
Coal	0	-3	-12	18	43	52	62						
Oil	0	-9	3	6	12	20	25						
Natural gas	0	0	0	0	6	10	9						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	17	28	58	89	117	144	165	4.9%	7.6%	4.4%	2.8%	2.1%	1.3%
Coal	2	4	15	32	43	52	62	7.0%	12.9%	8.1%	3.0%	2.1%	1.8%
Oil	3	8	19	24	30	37	40	11.2%	9.1%	2.3%	2.3%	2.1%	0.9%
Natural gas	0	1	8	11	21	29	31	n.s.	21.9%	3.5%	6.1%	3.4%	0.8%
Biomass	12	13	14	15	16	17	18	1.2%	0.3%	1.1%	0.5%	0.5%	0.8%
Nuclear <sup>1</sup>	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	11.7%	8.2%
Hydro	0	1	2	5	5	5	5	10.5%	6.6%	7.8%	0.1%	0.2%	0.1%
Other renewables	0	0	0	2	2	3	5	n.s.	n.s.	n.s.	3.3%	4.0%	3.8%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	17	28	58	89	117	144	165	4.9%	7.6%	4.4%	2.8%	2.1%	1.3%
Energy for Power Generation	2	5	16	33	45	59	70	10.8%	12.8%	7.5%	3.3%	2.6%	1.8%
Other Energy Transformation & Losses	0	0	1	-1	0	2	4	n.s.	n.s.	n.s.	n.s.	20.7%	8.9%
Final consumption	16	25	48	71	91	109	122	4.6%	6.8%	4.0%	2.4%	1.9%	1.1%
Steel, Non-Met. Minerals and Chem.	0	0	6	15	19	22	22	n.s.	n.s.	9.5%	2.7%	1.0%	0.2%
Other Industry	5	8	11	17	23	28	31	5.7%	3.8%	3.9%	3.2%	2.1%	1.0%
Non-Energy Use	0	0	2	3	3	4	4	16.9%	32.8%	1.3%	3.0%	1.7%	0.6%
Residential	10	12	16	19	20	21	22	2.4%	2.9%	1.6%	0.6%	0.6%	0.3%
Services	0	1	2	3	4	7	9	12.7%	4.8%	4.6%	4.8%	4.4%	3.1%
Agriculture	0	0	1	1	1	1	2	5.4%	3.8%	3.0%	2.5%	2.1%	1.7%
Road	1	3	10	15	19	26	31	10.3%	11.4%	4.0%	2.7%	3.0%	2.0%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Aviation	0	0	0	0	0	0	0	1.5%	3.9%	3.2%	1.0%	0.8%	0.3%
Other Transport	0	0	0	0	0	0	0	18.2%	8.3%	-3.1%	3.9%	2.6%	1.7%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Vietnam	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>1</b>	<b>4</b>	<b>14</b>	<b>26</b>	<b>38</b>	<b>49</b>	<b>58</b>	<b>10.9%</b>	<b>14.4%</b>	<b>6.7%</b>	<b>3.7%</b>	<b>2.7%</b>	<b>1.6%</b>
Coal	1	1	5	17	24	33	42	2.6%	15.5%	13.4%	3.7%	2.9%	2.4%
Oil	0	1	1	1	1	2	2	13.3%	-1.2%	-1.9%	3.2%	3.0%	-0.7%
Gas	0	1	8	8	12	14	13	n.s.	21.4%	0.5%	3.8%	1.8%	-0.7%
Biomass & Waste	0	0	0	0	0	1	1	n.s.	n.s.	16.9%	14.7%	9.9%	7.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	2.9%	0.3%	0.1%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>9</b>	<b>27</b>	<b>95</b>	<b>185</b>	<b>245</b>	<b>312</b>	<b>370</b>	<b>11.8%</b>	<b>13.6%</b>	<b>6.9%</b>	<b>2.8%</b>	<b>2.5%</b>	<b>1.7%</b>
Coal	2	3	20	71	102	136	174	4.6%	20.2%	13.6%	3.8%	2.9%	2.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	5	3	4	6	8	7	13.2%	-2.8%	2.0%	3.1%	2.9%	-0.6%
Gas	0	4	44	45	65	79	74	n.s.	26.1%	0.1%	3.9%	1.9%	-0.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	1	4	7	n.s.	n.s.	18.5%	15.8%	10.5%	7.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	1	3	7	n.s.	n.s.	n.s.	n.s.	11.8%	8.2%
Hydro	5	15	28	58	59	60	61	10.5%	6.6%	7.8%	0.1%	0.2%	0.1%
Wind	0	0	0	6	8	17	27	n.s.	n.s.	n.s.	3.1%	8.4%	4.9%
Solar	0	0	0	0	1	4	9	n.s.	n.s.	n.s.	16.7%	12.2%	9.6%
Other	0	0	0	1	2	2	2	n.s.	n.s.	n.s.	3.0%	0.7%	1.2%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>2</b>	<b>6</b>	<b>20</b>	<b>43</b>	<b>55</b>	<b>71</b>	<b>83</b>	<b>11.7%</b>	<b>11.7%</b>	<b>8.2%</b>	<b>2.6%</b>	<b>2.5%</b>	<b>1.6%</b>
Coal	1	1	3	11	17	21	27	-1.0%	17.4%	13.3%	4.0%	2.6%	2.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	2	2	3	4	4	4	8.2%	2.2%	6.0%	1.8%	-0.9%	-0.2%
Gas	0	1	6	11	16	20	17	n.s.	19.4%	5.9%	3.2%	2.5%	-1.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	0	1	n.s.	n.s.	12.6%	15.9%	10.6%	7.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	11.6%	8.0%
Hydro	1	3	8	14	14	15	15	16.6%	9.7%	6.0%	0.1%	0.2%	0.1%
Wind	0	0	0	2	3	7	11	n.s.	n.s.	n.s.	3.1%	8.3%	4.6%
Solar	0	0	0	0	1	3	7	n.s.	n.s.	n.s.	16.8%	12.1%	9.6%
Other	0	0	0	0	0	0	0	3.4%	0.0%	10.4%	3.1%	0.7%	1.0%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>16</b>	<b>25</b>	<b>48</b>	<b>71</b>	<b>91</b>	<b>109</b>	<b>122</b>	<b>4.6%</b>	<b>6.8%</b>	<b>4.0%</b>	<b>2.4%</b>	<b>1.9%</b>	<b>1.1%</b>
Coal	1	3	10	15	18	20	21	9.2%	11.8%	4.2%	2.1%	0.8%	0.4%
Oil	2	7	17	23	29	35	38	10.9%	9.8%	3.4%	2.1%	1.9%	0.9%
Gas	0	0	0	4	9	15	19	n.s.	39.2%	22.4%	9.7%	5.0%	2.0%
Electricity	1	2	7	14	19	24	28	13.7%	14.5%	6.7%	2.8%	2.4%	1.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	34.8%	16.9%
Biomass & Other	12	13	14	15	15	15	16	1.2%	0.3%	0.9%	0.0%	0.0%	0.2%
Share of Renewables <sup>3</sup> (%)	76%	58%	34%	29%	24%	21%	22%	-2.7%	-5.2%	-1.5%	-2.0%	-1.0%	0.2%
<b>Industry (incl. non-energy use)</b>	<b>5</b>	<b>8</b>	<b>20</b>	<b>34</b>	<b>46</b>	<b>54</b>	<b>57</b>	<b>5.8%</b>	<b>9.4%</b>	<b>5.7%</b>	<b>3.0%</b>	<b>1.6%</b>	<b>0.6%</b>
Coal	1	2	8	13	17	18	19	8.5%	13.4%	5.1%	2.3%	0.9%	0.5%
Oil	0	2	4	6	8	8	7	13.4%	10.3%	3.5%	2.1%	0.2%	-1.2%
Gas	0	0	0	3	6	10	11	n.s.	39.2%	20.2%	7.7%	4.1%	1.2%
Electricity	0	1	4	8	11	14	15	12.3%	17.7%	7.5%	3.0%	2.1%	1.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	3	3	3	3	4	4	5	1.3%	-2.1%	2.0%	1.4%	1.4%	1.2%
<b>Buildings</b>	<b>10</b>	<b>13</b>	<b>18</b>	<b>21</b>	<b>24</b>	<b>28</b>	<b>31</b>	<b>2.9%</b>	<b>3.1%</b>	<b>1.9%</b>	<b>1.2%</b>	<b>1.4%</b>	<b>1.0%</b>
Coal	0	1	2	1	1	1	1	14.3%	6.2%	-1.3%	-0.3%	-0.6%	-0.9%
Oil	0	1	2	2	2	2	2	11.7%	4.6%	1.2%	-0.4%	-0.4%	-0.3%
Gas	0	0	0	1	3	5	7	n.s.	n.s.	n.s.	16.1%	6.6%	3.0%
Electricity	0	1	3	6	7	10	12	15.9%	12.1%	5.5%	2.4%	2.7%	2.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	34.8%	16.9%
Biomass & Other	9	10	11	12	11	10	9	1.2%	1.0%	0.5%	-0.7%	-0.9%	-1.2%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>5.4%</b>	<b>3.8%</b>	<b>3.0%</b>	<b>2.5%</b>	<b>2.1%</b>	<b>1.7%</b>
Coal	0	0	0	0	0	0	0	-9.4%	-2.0%	-0.7%	0.0%	0.0%	0.0%
Oil	0	0	1	1	1	1	1	8.8%	4.2%	1.9%	2.3%	1.9%	1.5%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	4.0%	3.5%	8.9%	3.4%	2.9%	2.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>1</b>	<b>3</b>	<b>10</b>	<b>15</b>	<b>19</b>	<b>26</b>	<b>32</b>	<b>9.7%</b>	<b>11.2%</b>	<b>3.9%</b>	<b>2.7%</b>	<b>3.0%</b>	<b>2.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	3	10	15	19	25	29	9.9%	11.2%	3.8%	2.4%	2.8%	1.6%
Gas	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	24.9%	8.6%	8.2%
Electricity	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	14.8%	8.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	2	n.s.	n.s.	n.s.	16.1%	6.8%	7.2%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>-1</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>20.7%</b>	<b>8.9%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Rest South Asia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	262	333	398	468	531	585	626	2.4%	1.8%	1.6%	1.3%	1.0%	0.7%
GDP per capita (ppp, k\$'05)	1	1	2	3	5	8	12	1.9%	3.4%	3.8%	5.3%	5.2%	4.4%
GDP per capita (mer, k\$'05)	0	1	1	1	2	3	4	1.9%	3.4%	3.8%	5.3%	5.2%	4.4%
Share Value Added - Agriculture (%)	29	26	22	17	13	11	10	-1.1%	-1.7%	-2.6%	-2.8%	-1.6%	-0.9%
Share Value Added - Industry (%)	23	24	24	27	29	29	26	0.4%	-0.2%	1.3%	0.7%	-0.2%	-0.9%
Share Value Added - Services (%)	48	50	54	56	58	61	64	0.4%	0.9%	0.3%	0.4%	0.4%	0.5%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	23	26	-7.8%	10.3%	-2.2%	1.8%	1.8%	1.2%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	28	24	47	43	48	69	93	-1.2%	6.8%	-1.0%	1.1%	3.7%	3.1%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	445	545	671	875	1 235	1 631	1 944	2.1%	2.1%	2.7%	3.5%	2.8%	1.8%
Total GHG (excl. sinks)	445	545	671	875	1 235	1 631	1 944	2.1%	2.1%	2.7%	3.5%	2.8%	1.8%
Total GHG (energy, industry, agriculture)	347	452	614	821	1 191	1 587	1 908	2.7%	3.1%	2.9%	3.8%	2.9%	1.9%
CO <sub>2</sub>	87	154	242	408	700	1 017	1 267	5.8%	4.6%	5.3%	5.6%	3.8%	2.2%
CH <sub>4</sub>	216	245	307	340	407	474	530	1.3%	2.3%	1.1%	1.8%	1.5%	1.1%
N <sub>2</sub> O	42	52	64	72	82	94	108	2.1%	2.2%	1.1%	1.3%	1.4%	1.4%
F gases	1	1	1	1	2	2	3	-2.1%	3.0%	1.2%	2.4%	3.1%	2.1%
Total GHG from Energy and Industry	150	239	362	565	930	1 321	1 629	4.7%	4.2%	4.6%	5.1%	3.6%	2.1%
CO <sub>2</sub> Emissions from Fuel Comb.	81	143	221	374	647	942	1 174	5.9%	4.5%	5.4%	5.6%	3.8%	2.2%
Power generation/District heating	20	44	68	93	145	227	307	8.4%	4.3%	3.2%	4.5%	4.6%	3.0%
Industry	25	36	57	78	149	210	250	3.6%	4.9%	3.2%	6.6%	3.5%	1.7%
Buildings	12	17	26	55	122	182	210	3.5%	4.1%	7.8%	8.2%	4.1%	1.4%
Agriculture	2	3	3	5	6	8	10	3.2%	2.7%	3.2%	3.1%	2.8%	2.3%
Transport	19	37	59	133	208	285	349	6.8%	4.8%	8.4%	4.5%	3.2%	2.1%
Other	3	6	7	10	18	30	49	7.8%	2.4%	3.1%	6.0%	5.3%	4.9%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	4.1%	0.6%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	4.1%	0.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	3.9%	0.4%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	4.4%	0.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	56	77	114	115	106	111	122	3.2%	4.1%	0.1%	-0.9%	0.5%	0.9%
Coal	1	1	2	2	4	8	11	1.9%	4.5%	-0.4%	6.6%	6.1%	3.8%
Oil	3	3	3	4	4	4	4	1.0%	1.3%	0.0%	0.5%	0.2%	0.3%
Natural gas	14	26	51	63	46	40	35	6.0%	7.2%	2.0%	-3.0%	-1.5%	-1.2%
Biomass	36	44	52	40	41	43	44	2.0%	1.7%	-2.4%	0.2%	0.4%	0.2%
Nuclear <sup>1</sup>	0	1	1	2	4	7	11	21.2%	5.5%	7.9%	6.9%	6.2%	4.4%
Hydro	2	2	4	4	5	5	6	0.4%	7.0%	0.1%	1.4%	0.8%	0.9%
Other renewables	0	0	0	0	2	5	12	n.s.	n.s.	43.9%	16.6%	12.0%	8.9%
Net Imports	12	24	25	67	181	290	369						
Coal	1	1	3	10	21	41	64						
Oil	12	24	28	57	85	108	125						
Natural gas	-1	-2	-7	-1	75	140	178						
Biomass	0	0	0	2	1	0	0						
Biofuels	0	0	0	0	0	1	2						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	68	100	139	183	287	401	492	4.0%	3.3%	2.8%	4.6%	3.4%	2.1%
Coal	2	3	6	12	25	48	75	1.1%	8.1%	7.8%	7.3%	7.0%	4.5%
Oil	14	27	32	60	88	112	129	6.7%	1.5%	6.6%	3.9%	2.4%	1.4%
Natural gas	14	24	44	61	122	179	213	5.8%	6.4%	3.3%	7.1%	3.9%	1.7%
Biomass	36	44	52	42	42	43	44	2.0%	1.7%	-2.0%	-0.1%	0.3%	0.2%
Nuclear <sup>1</sup>	0	1	1	2	4	7	11	21.2%	5.5%	7.9%	6.9%	6.2%	4.4%
Hydro	2	2	4	4	5	5	6	0.4%	7.0%	0.1%	1.4%	0.8%	0.9%
Other renewables	0	0	0	0	2	5	12	n.s.	n.s.	43.9%	16.6%	12.0%	8.9%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	68	100	139	183	287	401	492	4.0%	3.3%	2.8%	4.6%	3.4%	2.1%
Energy for Power Generation	10	19	31	40	61	93	127	6.8%	4.9%	2.7%	4.4%	4.3%	3.1%
Other Energy Transformation & Losses	1	3	3	4	10	20	36	11.6%	-0.3%	3.8%	9.4%	7.1%	6.0%
Final consumption	60	84	116	154	242	333	399	3.4%	3.3%	2.8%	4.6%	3.3%	1.8%
Steel, Non-Met. Minerals and Chem.	3	4	7	9	14	20	23	2.7%	5.0%	2.8%	4.6%	3.3%	1.4%
Other Industry	7	11	19	24	52	72	81	4.9%	5.3%	2.6%	7.8%	3.3%	1.2%
Non-Energy Use	4	5	5	7	11	14	16	4.2%	-0.4%	2.8%	4.6%	3.0%	1.1%
Residential	38	48	60	62	78	96	103	2.4%	2.3%	0.3%	2.4%	2.1%	0.7%
Services	1	2	3	5	10	18	27	5.0%	5.1%	3.7%	7.4%	6.1%	3.8%
Agriculture	1	1	2	3	4	5	6	2.0%	4.0%	3.1%	3.4%	3.2%	2.7%
Road	6	11	18	41	68	100	131	6.2%	5.5%	8.6%	5.2%	3.9%	2.8%
Rail	0	0	0	1	1	1	1	1.5%	0.4%	3.5%	1.8%	2.2%	2.1%
Aviation	0	1	1	1	3	5	9	16.2%	0.1%	4.4%	7.2%	6.7%	5.2%
Other Transport	0	0	0	1	1	2	2	5.2%	9.9%	2.9%	5.5%	4.7%	3.7%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest South Asia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>8</b>	<b>16</b>	<b>25</b>	<b>33</b>	<b>51</b>	<b>76</b>	<b>98</b>	<b>7.8%</b>	<b>4.6%</b>	<b>2.7%</b>	<b>4.3%</b>	<b>4.1%</b>	<b>2.6%</b>
Coal	0	0	0	4	10	27	46	17.8%	12.7%	30.6%	9.0%	10.0%	5.4%
Oil	2	8	9	10	11	7	4	12.6%	2.0%	0.3%	1.0%	-3.7%	-5.3%
Gas	5	8	16	19	30	41	47	4.8%	6.4%	1.9%	4.5%	3.4%	1.4%
Biomass & Waste	0	0	0	0	0	0	1	n.s.	n.s.	11.3%	4.1%	12.1%	9.4%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>52</b>	<b>95</b>	<b>158</b>	<b>206</b>	<b>332</b>	<b>545</b>	<b>785</b>	<b>6.2%</b>	<b>5.2%</b>	<b>2.7%</b>	<b>4.9%</b>	<b>5.1%</b>	<b>3.7%</b>
Coal	0	0	1	17	49	138	241	20.3%	13.0%	35.7%	11.0%	10.9%	5.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	8	32	40	42	46	32	19	14.2%	2.3%	0.5%	0.9%	-3.7%	-5.1%
Gas	19	36	65	85	145	224	267	6.4%	6.1%	2.7%	5.5%	4.5%	1.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	1	3	n.s.	n.s.	15.9%	8.3%	15.1%	10.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	2	3	7	15	28	43	21.2%	5.5%	8.1%	7.2%	6.4%	4.5%
Hydro	24	25	49	50	57	62	68	0.4%	7.0%	0.1%	1.4%	0.8%	0.9%
Wind	0	0	0	3	12	37	80	n.s.	41.0%	41.5%	15.3%	11.6%	7.9%
Solar	0	0	0	1	7	23	62	n.s.	7.8%	53.0%	19.3%	12.6%	10.4%
Other	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	28.4%	17.9%	12.1%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>13</b>	<b>24</b>	<b>34</b>	<b>50</b>	<b>71</b>	<b>117</b>	<b>194</b>	<b>6.5%</b>	<b>3.7%</b>	<b>3.9%</b>	<b>3.6%</b>	<b>5.2%</b>	<b>5.2%</b>
Coal	1	1	1	2	7	19	35	2.2%	3.0%	8.5%	11.1%	10.7%	6.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	5	7	14	14	13	14	4.7%	3.4%	7.3%	0.3%	-0.8%	0.5%
Gas	4	10	15	19	25	38	54	10.5%	3.8%	2.3%	2.8%	4.2%	3.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	5.8%	7.8%	14.7%	10.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	1	2	4	6	13.7%	0.0%	9.4%	6.9%	6.2%	4.3%
Hydro	5	7	11	12	13	14	16	3.7%	4.0%	0.8%	1.4%	0.8%	0.9%
Wind	0	0	0	1	5	15	32	n.s.	29.9%	41.0%	15.1%	11.4%	7.7%
Solar	0	0	0	1	4	14	37	n.s.	n.s.	n.s.	19.2%	12.5%	10.4%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	27.7%	17.3%	11.5%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>60</b>	<b>84</b>	<b>116</b>	<b>154</b>	<b>242</b>	<b>333</b>	<b>399</b>	<b>3.4%</b>	<b>3.3%</b>	<b>2.8%</b>	<b>4.6%</b>	<b>3.3%</b>	<b>1.8%</b>
Coal	2	2	5	8	14	21	28	0.3%	9.0%	3.7%	6.2%	4.1%	2.9%
Oil	11	18	22	49	76	103	122	5.1%	1.6%	8.6%	4.4%	3.1%	1.8%
Gas	8	14	27	40	87	129	150	5.7%	6.7%	4.2%	8.1%	4.0%	1.6%
Electricity	3	6	11	14	23	38	55	6.1%	6.5%	2.7%	4.9%	5.1%	3.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	36	44	52	42	41	42	43	2.0%	1.7%	-2.1%	-0.2%	0.3%	0.1%
Share of Renewables <sup>3</sup> (%)	64%	56%	49%	31%	20%	17%	18%	-1.3%	-1.4%	-4.6%	-4.0%	-1.7%	0.3%
<b>Industry (incl. non-energy use)</b>	<b>14</b>	<b>21</b>	<b>31</b>	<b>40</b>	<b>77</b>	<b>106</b>	<b>119</b>	<b>4.2%</b>	<b>4.0%</b>	<b>2.7%</b>	<b>6.6%</b>	<b>3.3%</b>	<b>1.2%</b>
Coal	2	2	5	7	14	21	28	0.5%	8.5%	3.9%	6.4%	4.2%	3.0%
Oil	2	3	2	4	6	9	10	6.1%	-4.1%	5.3%	4.9%	3.4%	1.1%
Gas	6	9	15	19	37	52	57	4.7%	4.7%	2.3%	7.0%	3.3%	1.1%
Electricity	1	2	4	6	8	11	13	4.6%	7.6%	3.0%	3.5%	3.2%	2.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	3	4	5	5	12	14	11	4.2%	1.9%	0.3%	9.1%	2.1%	-2.3%
<b>Buildings</b>	<b>39</b>	<b>50</b>	<b>63</b>	<b>67</b>	<b>89</b>	<b>115</b>	<b>130</b>	<b>2.5%</b>	<b>2.5%</b>	<b>0.5%</b>	<b>2.9%</b>	<b>2.6%</b>	<b>1.2%</b>
Coal	0	0	0	0	0	0	0	-11.7%	31.8%	0.5%	-0.8%	-1.1%	-1.4%
Oil	2	2	2	3	4	5	6	-0.2%	-2.1%	5.3%	3.5%	2.4%	0.3%
Gas	2	4	8	19	46	70	82	7.8%	6.4%	8.9%	9.2%	4.3%	1.6%
Electricity	2	3	6	8	11	18	25	8.4%	6.0%	2.4%	3.7%	4.8%	3.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	33	40	47	37	27	21	17	1.9%	1.7%	-2.5%	-3.0%	-2.4%	-2.4%
<b>Agriculture</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>2.0%</b>	<b>4.0%</b>	<b>3.1%</b>	<b>3.4%</b>	<b>3.2%</b>	<b>2.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	1	1	2	3	3	3.1%	2.7%	3.3%	3.1%	2.8%	2.3%
Gas	0	0	0	0	0	0	0	n.s.	2.9%	1.5%	2.9%	2.6%	2.1%
Electricity	0	0	1	1	2	2	3	0.1%	6.1%	2.8%	3.9%	3.6%	3.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>6</b>	<b>12</b>	<b>20</b>	<b>44</b>	<b>73</b>	<b>107</b>	<b>143</b>	<b>6.4%</b>	<b>5.1%</b>	<b>8.2%</b>	<b>5.2%</b>	<b>4.0%</b>	<b>2.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	0.0%	0.0%	0.0%
Oil	6	12	16	41	64	86	104	6.3%	3.2%	9.6%	4.4%	3.1%	1.9%
Gas	0	0	3	2	4	7	11	n.s.	42.7%	-4.9%	6.5%	6.1%	4.8%
Electricity	0	0	0	0	3	7	13	-7.2%	n.s.	n.s.	40.0%	10.7%	6.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	3	7	15	n.s.	n.s.	n.s.	18.4%	10.5%	8.0%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>10</b>	<b>20</b>	<b>36</b>	<b>11.6%</b>	<b>-0.3%</b>	<b>3.8%</b>	<b>9.4%</b>	<b>7.1%</b>	<b>6.0%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Rest South East Asia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	170	202	229	257	281	300	314	1.8%	1.3%	1.1%	0.9%	0.7%	0.4%
GDP per capita (ppp, k\$'05)	2	2	3	4	5	6	8	2.8%	4.1%	3.3%	2.1%	1.9%	2.1%
GDP per capita (mer, k\$'05)	1	1	2	2	3	3	4	3.1%	4.2%	3.4%	2.1%	1.9%	2.1%
Share Value Added - Agriculture (%)	14	9	10	9	8	8	7	-3.8%	1.1%	-1.5%	-0.9%	-0.7%	-0.6%
Share Value Added - Industry (%)	36	39	37	37	37	37	37	0.8%	-0.6%	0.0%	0.1%	0.0%	-0.1%
Share Value Added - Services (%)	50	51	53	54	55	55	56	0.2%	0.2%	0.3%	0.1%	0.1%	0.1%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	23	26	-7.8%	10.3%	-2.2%	1.8%	1.8%	1.2%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	28	24	47	43	48	69	93	-1.2%	6.8%	-1.0%	1.1%	3.7%	3.1%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	779	897	999	1 226	1 367	1 448	1 555	1.4%	1.1%	2.1%	1.1%	0.6%	0.7%
Total GHG (excl. sinks)	779	897	999	1 226	1 367	1 482	1 631	1.4%	1.1%	2.1%	1.1%	0.8%	1.0%
Total GHG (energy, industry, agriculture)	565	710	832	1 050	1 202	1 281	1 400	2.3%	1.6%	2.4%	1.4%	0.6%	0.9%
CO <sub>2</sub>	378	494	574	698	780	846	934	2.7%	1.5%	2.0%	1.1%	0.8%	1.0%
CH <sub>4</sub>	141	161	196	269	319	309	316	1.4%	2.0%	3.2%	1.7%	-0.3%	0.2%
N <sub>2</sub> O	44	43	42	53	60	67	74	-0.1%	-0.3%	2.3%	1.3%	1.1%	0.9%
F gases	3	12	20	31	43	58	76	15.7%	5.3%	4.7%	3.3%	2.9%	2.7%
Total GHG from Energy and Industry	444	578	676	870	1 004	1 065	1 170	2.7%	1.6%	2.6%	1.4%	0.6%	0.9%
CO <sub>2</sub> Emissions from Fuel Comb.	350	470	546	658	729	786	866	3.0%	1.5%	1.9%	1.0%	0.8%	1.0%
Power generation/District heating	111	202	256	335	375	413	478	6.1%	2.4%	2.7%	1.1%	1.0%	1.5%
Industry	132	122	144	155	172	180	183	-0.8%	1.7%	0.7%	1.1%	0.4%	0.2%
Buildings	32	33	34	35	39	41	41	0.5%	0.1%	0.4%	1.1%	0.4%	0.2%
Agriculture	4	4	2	3	3	4	4	-0.6%	-5.7%	3.1%	1.3%	1.1%	1.1%
Transport	45	73	82	98	105	112	121	5.0%	1.2%	1.7%	0.7%	0.7%	0.8%
Other	26	36	28	33	35	37	39	3.3%	-2.5%	1.7%	0.7%	0.5%	0.6%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	7.4%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	7.5%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	7.3%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	7.5%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	88	91	127	412	497	286	214	0.2%	3.5%	12.5%	1.9%	-5.4%	-2.8%
Coal	32	23	46	289	331	112	38	-3.2%	7.2%	20.2%	1.4%	-10.3%	-10.2%
Oil	9	10	11	7	6	4	3	1.7%	0.5%	-3.7%	-2.2%	-3.4%	-2.5%
Natural gas	9	13	24	31	48	33	22	3.3%	6.4%	2.8%	4.3%	-3.6%	-4.1%
Biomass	23	22	24	51	57	64	61	-0.4%	1.0%	7.8%	1.1%	1.3%	-0.5%
Nuclear <sup>1</sup>	9	10	11	11	12	18	18	1.6%	0.8%	-0.2%	1.2%	3.8%	0.0%
Hydro	3	3	3	3	4	4	4	0.2%	1.3%	0.7%	0.5%	0.5%	0.4%
Other renewables	5	10	9	19	39	50	68	7.9%	-1.4%	8.2%	7.3%	2.5%	3.0%
Net Imports	62	111	112	-119	-151	101	214						
Coal	20	37	32	-195	-229	-2	86						
Oil	47	74	72	90	89	87	87						
Natural gas	-5	-1	7	7	9	38	58						
Biomass	0	0	0	-22	-21	-22	-18						
Biofuels	0	0	0	0	-1	-2	-1						
Electricity	0	1	1	1	1	1	1						
Primary Energy Demand <sup>2</sup>	150	202	239	292	345	387	429	3.0%	1.7%	2.0%	1.7%	1.1%	1.0%
Coal	52	60	78	94	103	110	124	1.5%	2.6%	1.9%	0.8%	0.7%	1.2%
Oil	56	84	83	97	95	91	90	4.2%	-0.1%	1.6%	-0.3%	-0.4%	0.0%
Natural gas	4	12	31	38	57	72	80	11.5%	9.7%	2.2%	4.2%	2.3%	1.2%
Biomass	23	22	24	28	36	43	44	-0.4%	1.0%	1.8%	2.3%	1.8%	0.2%
Nuclear <sup>1</sup>	9	10	11	11	12	18	18	1.6%	0.8%	-0.2%	1.2%	3.8%	0.0%
Hydro	3	3	3	3	4	4	4	0.2%	1.3%	0.7%	0.5%	0.5%	0.4%
Other renewables	5	10	9	19	39	50	68	7.9%	-1.4%	8.2%	7.3%	2.5%	3.0%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	150	202	239	292	345	387	429	3.0%	1.7%	2.0%	1.7%	1.1%	1.0%
Energy for Power Generation	48	82	101	133	168	196	233	5.6%	2.1%	2.8%	2.3%	1.6%	1.7%
Other Energy Transformation & Losses	12	16	16	17	21	26	25	3.3%	-0.4%	0.7%	2.4%	1.9%	-0.2%
Final consumption	105	128	158	187	211	233	253	2.0%	2.1%	1.7%	1.2%	1.0%	0.8%
Steel, Non-Met. Minerals and Chem.	14	18	22	26	29	30	31	2.9%	2.3%	1.4%	1.2%	0.4%	0.2%
Other Industry	29	27	30	35	41	46	51	-0.7%	1.3%	1.3%	1.7%	1.2%	1.0%
Non-Energy Use	6	11	27	36	39	42	44	5.8%	9.4%	2.7%	0.9%	0.7%	0.5%
Residential	27	29	31	34	36	38	39	0.6%	0.6%	1.2%	0.5%	0.5%	0.3%
Services	11	14	17	20	25	30	37	2.6%	2.3%	1.8%	1.9%	2.2%	2.1%
Agriculture	1	1	1	1	2	2	2	-0.2%	-3.1%	3.1%	1.6%	1.5%	1.5%
Road	16	26	26	31	35	39	44	5.0%	0.2%	1.8%	1.2%	1.2%	1.0%
Rail	0	0	1	1	1	1	1	0.1%	11.3%	3.9%	1.0%	0.9%	0.9%
Aviation	1	1	1	1	1	1	1	5.4%	-4.4%	5.9%	2.0%	1.3%	0.4%
Other Transport	1	1	1	1	2	2	2	5.2%	-0.8%	0.7%	1.4%	0.7%	0.6%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest South East Asia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>32</b>	<b>59</b>	<b>78</b>	<b>100</b>	<b>113</b>	<b>125</b>	<b>143</b>	<b>6.5%</b>	<b>2.8%</b>	<b>2.5%</b>	<b>1.3%</b>	<b>1.0%</b>	<b>1.4%</b>
Coal	17	33	45	64	72	82	97	6.7%	3.1%	3.6%	1.2%	1.3%	1.7%
Oil	13	16	7	7	5	5	7	2.4%	-7.7%	-0.8%	-2.0%	-0.9%	3.9%
Gas	1	9	24	26	30	31	30	22.2%	10.6%	0.9%	1.6%	0.2%	-0.3%
Biomass & Waste	0	1	2	2	2	3	5	11.5%	9.2%	0.7%	-0.1%	5.1%	3.6%
Other	0	1	1	2	3	4	5	7.8%	-1.6%	7.4%	6.9%	1.3%	2.3%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>198</b>	<b>329</b>	<b>442</b>	<b>560</b>	<b>671</b>	<b>804</b>	<b>960</b>	<b>5.2%</b>	<b>3.0%</b>	<b>2.4%</b>	<b>1.8%</b>	<b>1.8%</b>	<b>1.8%</b>
Coal	69	135	185	262	291	325	380	6.9%	3.2%	3.5%	1.0%	1.1%	1.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	54	68	30	28	23	21	31	2.3%	-7.9%	-0.5%	-2.0%	-0.8%	3.9%
Gas	3	41	132	143	167	171	164	28.2%	12.5%	0.8%	1.5%	0.3%	-0.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	1	2	5	5	6	13	22	13.8%	8.6%	0.2%	2.3%	7.8%	5.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	33	39	42	41	47	70	71	1.6%	0.8%	-0.2%	1.3%	4.1%	0.2%
Hydro	32	32	37	39	42	44	46	0.2%	1.3%	0.7%	0.5%	0.5%	0.4%
Wind	0	0	1	15	38	70	104	n.s.	n.s.	29.5%	9.7%	6.3%	3.9%
Solar	0	0	0	6	18	43	83	n.s.	n.s.	34.5%	11.9%	9.4%	6.7%
Other	5	12	10	20	40	46	59	7.8%	-1.6%	7.4%	6.9%	1.4%	2.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>50</b>	<b>79</b>	<b>104</b>	<b>133</b>	<b>168</b>	<b>203</b>	<b>233</b>	<b>4.7%</b>	<b>2.8%</b>	<b>2.5%</b>	<b>2.4%</b>	<b>1.9%</b>	<b>1.4%</b>
Coal	17	29	35	46	56	60	57	5.5%	1.8%	2.8%	2.2%	0.5%	-0.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	15	20	13	15	15	11	10	2.7%	-4.4%	1.7%	-0.3%	-3.0%	-0.9%
Gas	2	10	30	35	38	38	30	20.2%	12.0%	1.6%	0.6%	0.2%	-2.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	1	1	1	1	2	3	23.2%	4.2%	-2.8%	1.4%	7.8%	4.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	5	5	5	5	6	9	9	0.0%	0.2%	0.1%	1.3%	4.1%	0.2%
Hydro	10	13	18	18	19	20	20	2.3%	3.4%	-0.1%	0.5%	0.5%	0.4%
Wind	0	0	1	6	16	29	42	n.s.	n.s.	28.9%	9.5%	6.1%	3.8%
Solar	0	0	0	4	12	29	55	n.s.	n.s.	34.4%	11.8%	9.3%	6.7%
Other	1	2	2	3	6	6	8	8.1%	0.2%	4.3%	6.8%	0.7%	2.1%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>105</b>	<b>128</b>	<b>158</b>	<b>187</b>	<b>211</b>	<b>233</b>	<b>253</b>	<b>2.0%</b>	<b>2.1%</b>	<b>1.7%</b>	<b>1.2%</b>	<b>1.0%</b>	<b>0.8%</b>
Coal	30	23	28	24	24	23	23	-2.7%	1.9%	-1.4%	0.1%	-0.6%	-0.2%
Oil	36	56	68	82	81	78	75	4.5%	1.9%	1.9%	-0.1%	-0.4%	-0.3%
Gas	1	3	5	12	25	38	47	5.5%	7.0%	9.0%	8.0%	4.1%	2.1%
Electricity	14	25	34	43	52	62	74	5.6%	3.3%	2.4%	1.8%	1.8%	1.8%
Heat	1	1	1	1	1	3	4	-2.9%	4.0%	1.3%	3.0%	7.1%	3.8%
Biomass & Other	22	21	22	25	27	29	30	-0.7%	0.5%	1.3%	0.9%	0.7%	0.4%
Share of Renewables <sup>3</sup> (%)	24%	19%	18%	20%	22%	25%	28%	-2.1%	-0.5%	0.6%	1.2%	1.4%	1.2%
<b>Industry (incl. non-energy use)</b>	<b>49</b>	<b>56</b>	<b>80</b>	<b>96</b>	<b>110</b>	<b>119</b>	<b>126</b>	<b>1.4%</b>	<b>3.7%</b>	<b>1.8%</b>	<b>1.3%</b>	<b>0.8%</b>	<b>0.6%</b>
Coal	26	19	24	22	22	21	21	-2.9%	2.2%	-1.1%	0.1%	-0.6%	-0.1%
Oil	14	23	35	43	40	36	31	4.7%	4.5%	2.0%	-0.6%	-1.2%	-1.4%
Gas	1	1	3	8	19	29	36	6.5%	10.5%	11.1%	8.3%	4.5%	2.1%
Electricity	7	11	15	20	25	29	33	4.5%	3.5%	2.9%	2.1%	1.4%	1.4%
Heat	0	0	0	0	0	0	0	-3.6%	0.7%	0.3%	-0.2%	-0.3%	-0.2%
Biomass & Other	1	2	2	3	3	4	6	7.7%	2.8%	1.8%	1.5%	2.3%	2.5%
<b>Buildings</b>	<b>38</b>	<b>43</b>	<b>48</b>	<b>55</b>	<b>61</b>	<b>69</b>	<b>77</b>	<b>1.2%</b>	<b>1.2%</b>	<b>1.4%</b>	<b>1.1%</b>	<b>1.2%</b>	<b>1.1%</b>
Coal	5	4	4	3	2	2	2	-1.6%	0.1%	-4.2%	-0.3%	-0.6%	-0.9%
Oil	4	5	4	6	5	4	3	2.4%	-0.5%	2.2%	-1.8%	-2.0%	-1.6%
Gas	1	1	2	3	6	8	10	4.9%	2.5%	5.7%	6.9%	2.9%	1.6%
Electricity	7	13	18	22	25	31	38	6.8%	3.0%	2.0%	1.4%	2.0%	2.1%
Heat	1	0	1	1	1	2	4	-2.5%	5.3%	1.6%	3.7%	8.1%	4.1%
Biomass & Other	21	19	19	21	21	21	20	-1.2%	0.1%	1.0%	0.2%	-0.2%	-0.4%
<b>Agriculture</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>-0.2%</b>	<b>-3.1%</b>	<b>3.1%</b>	<b>1.6%</b>	<b>1.5%</b>	<b>1.5%</b>
Coal	0	0	0	0	0	0	0	-32.8%	12.8%	-2.2%	0.0%	0.0%	0.0%
Oil	1	1	1	1	1	1	1	0.0%	-5.7%	3.1%	1.3%	1.1%	1.1%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	1	1	1	1.5%	4.7%	3.2%	2.3%	2.1%	2.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	4.3%	5.4%	0.2%	0.0%	0.0%	0.0%
<b>Transport</b>	<b>17</b>	<b>28</b>	<b>28</b>	<b>34</b>	<b>39</b>	<b>44</b>	<b>48</b>	<b>5.0%</b>	<b>0.1%</b>	<b>1.9%</b>	<b>1.2%</b>	<b>1.2%</b>	<b>1.0%</b>
Coal	0	0	0	0	0	0	0	-4.4%	-3.7%	-14.1%	0.0%	0.0%	0.0%
Oil	17	28	28	33	35	37	40	5.0%	-0.1%	1.8%	0.6%	0.6%	0.6%
Gas	0	0	0	0	1	1	2	n.s.	n.s.	-1.2%	12.1%	6.2%	5.9%
Electricity	0	0	0	0	1	2	2	4.5%	15.0%	3.9%	6.7%	5.8%	4.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	2	4	4	n.s.	n.s.	14.3%	11.3%	5.1%	1.6%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>12</b>	<b>16</b>	<b>16</b>	<b>17</b>	<b>21</b>	<b>26</b>	<b>25</b>	<b>3.3%</b>	<b>-0.4%</b>	<b>0.7%</b>	<b>2.4%</b>	<b>1.9%</b>	<b>-0.2%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

<b>Australia</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	17	19	22	26	28	31	33	1.1%	1.5%	1.5%	1.1%	0.9%	0.8%
GDP per capita (ppp, k\$'05)	24	30	34	39	46	53	61	2.2%	1.5%	1.3%	1.6%	1.5%	1.3%
GDP per capita (mer, k\$'05)	25	31	36	41	48	56	64	2.2%	1.5%	1.3%	1.6%	1.5%	1.3%
Share Value Added - Agriculture (%)	5	4	2	2	2	2	2	-1.8%	-6.8%	-0.1%	-0.6%	-0.4%	-0.3%
Share Value Added - Industry (%)	31	27	27	27	25	23	22	-1.4%	0.1%	0.0%	-0.7%	-0.7%	-0.7%
Share Value Added - Services (%)	64	69	71	71	73	75	77	0.8%	0.3%	0.0%	0.3%	0.2%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	23	26	-7.8%	10.3%	-2.2%	1.8%	1.8%	1.2%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	28	24	47	43	48	69	93	-1.2%	6.8%	-1.0%	1.1%	3.7%	3.1%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
<b>Total GHG</b>	<b>513</b>	<b>543</b>	<b>567</b>	<b>518</b>	<b>506</b>	<b>528</b>	<b>517</b>	<b>0.6%</b>	<b>0.4%</b>	<b>-0.9%</b>	<b>-0.2%</b>	<b>0.4%</b>	<b>-0.2%</b>
<b>Total GHG (excl. sinks)</b>	<b>551</b>	<b>557</b>	<b>590</b>	<b>525</b>	<b>509</b>	<b>557</b>	<b>584</b>	<b>0.1%</b>	<b>0.6%</b>	<b>-1.2%</b>	<b>-0.3%</b>	<b>0.9%</b>	<b>0.5%</b>
<b>Total GHG (energy, industry, agriculture)</b>	<b>419</b>	<b>491</b>	<b>546</b>	<b>508</b>	<b>493</b>	<b>526</b>	<b>540</b>	<b>1.6%</b>	<b>1.1%</b>	<b>-0.7%</b>	<b>-0.3%</b>	<b>0.7%</b>	<b>0.3%</b>
CO <sub>2</sub>	276	351	403	382	377	401	411	2.4%	1.4%	-0.5%	-0.1%	0.6%	0.2%
CH <sub>4</sub>	110	107	102	88	81	88	90	-0.3%	-0.4%	-1.5%	-0.7%	0.8%	0.2%
N <sub>2</sub> O	28	31	33	30	28	29	29	1.1%	0.5%	-0.9%	-0.6%	0.1%	0.2%
F gases	5	3	7	9	7	8	10	-6.6%	10.6%	1.8%	-2.4%	2.0%	1.7%
<b>Total GHG from Energy and Industry</b>	<b>339</b>	<b>410</b>	<b>473</b>	<b>438</b>	<b>421</b>	<b>451</b>	<b>462</b>	<b>1.9%</b>	<b>1.4%</b>	<b>-0.8%</b>	<b>-0.4%</b>	<b>0.7%</b>	<b>0.3%</b>
<b>CO<sub>2</sub> Emissions from Fuel Comb.</b>	<b>261</b>	<b>334</b>	<b>384</b>	<b>363</b>	<b>357</b>	<b>380</b>	<b>389</b>	<b>2.5%</b>	<b>1.4%</b>	<b>-0.6%</b>	<b>-0.2%</b>	<b>0.6%</b>	<b>0.2%</b>
Power generation/District heating	138	186	208	159	155	168	186	3.0%	1.1%	-2.6%	-0.2%	0.8%	1.0%
Industry	38	44	43	52	50	55	57	1.4%	-0.2%	1.8%	-0.3%	0.9%	0.3%
Buildings	9	11	13	13	15	16	16	2.1%	1.6%	0.6%	0.8%	1.2%	-0.2%
Agriculture	3	4	6	7	7	6	6	2.2%	3.9%	0.9%	-0.4%	-0.5%	-0.6%
Transport	58	70	83	93	85	80	73	1.9%	1.6%	1.2%	-0.9%	-0.7%	-0.9%
Other	14	19	32	39	45	54	51	2.7%	5.5%	2.1%	1.4%	1.9%	-0.6%
<b>CO<sub>2</sub> captured (CCS)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>16</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>20.1%</b>	<b>20.3%</b>	<b>24.8%</b>
Coal	0	0	0	0	0	1	14	n.s.	n.s.	n.s.	14.3%	24.1%	27.7%
Gas	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	17.0%	10.5%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	23.4%	1.0%	6.9%
<b>Energy Balance, by fuel (Mtoe)</b>													
<b>Primary Production</b>	<b>191</b>	<b>249</b>	<b>319</b>	<b>384</b>	<b>501</b>	<b>607</b>	<b>626</b>	<b>2.7%</b>	<b>2.5%</b>	<b>1.9%</b>	<b>2.7%</b>	<b>1.9%</b>	<b>0.3%</b>
Coal	137	176	248	280	334	411	408	2.6%	3.4%	1.2%	1.8%	2.1%	-0.1%
Oil	32	40	28	23	36	40	37	2.3%	-3.7%	-2.0%	4.8%	0.9%	-0.7%
Natural gas	17	26	38	63	102	120	139	4.1%	4.0%	5.2%	4.9%	1.6%	1.5%
Biomass	4	5	4	13	21	26	27	2.4%	-1.4%	11.3%	5.1%	2.0%	0.6%
Nuclear <sup>1</sup>	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	23.9%	10.1%	7.8%
Hydro	1	1	1	1	1	1	1	1.2%	-2.1%	1.4%	0.5%	0.0%	0.1%
Other renewables	0	0	1	4	6	8	11	0.9%	21.5%	20.0%	4.2%	3.7%	2.4%
<b>Net Imports</b>	<b>- 100</b>	<b>- 140</b>	<b>- 196</b>	<b>- 251</b>	<b>- 360</b>	<b>- 451</b>	<b>- 455</b>						
Coal	- 98	- 127	- 197	- 244	- 305	- 378	- 368						
Oil	1	- 6	13	26	7	- 2	- 6						
Natural gas	- 3	- 6	- 12	- 28	- 54	- 62	- 74						
Biomass	0	0	0	- 5	- 8	- 9	- 6						
Biofuels	0	0	0	0	0	- 1	- 1						
Electricity	0	0	0	0	0	0	0						
<b>Primary Energy Demand<sup>2</sup></b>	<b>91</b>	<b>109</b>	<b>124</b>	<b>133</b>	<b>141</b>	<b>157</b>	<b>171</b>	<b>1.8%</b>	<b>1.2%</b>	<b>0.7%</b>	<b>0.6%</b>	<b>1.1%</b>	<b>0.9%</b>
Coal	39	49	51	36	29	34	40	2.4%	0.3%	-3.4%	-2.1%	1.4%	1.7%
Oil	33	34	40	49	44	38	31	0.5%	1.6%	2.0%	-1.2%	-1.5%	-1.9%
Natural gas	14	19	26	35	48	58	65	3.0%	3.1%	2.9%	3.3%	1.9%	1.1%
Biomass	4	5	4	8	13	17	22	2.4%	-1.4%	5.8%	5.1%	3.0%	2.5%
Nuclear <sup>1</sup>	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	23.9%	10.1%	7.8%
Hydro	1	1	1	1	1	1	1	1.2%	-2.1%	1.4%	0.5%	0.0%	0.1%
Other renewables	0	0	1	4	6	8	11	0.9%	21.5%	20.0%	4.2%	3.7%	2.4%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
<b>Primary Energy Demand</b>	<b>91</b>	<b>109</b>	<b>124</b>	<b>133</b>	<b>141</b>	<b>157</b>	<b>171</b>	<b>1.8%</b>	<b>1.2%</b>	<b>0.7%</b>	<b>0.6%</b>	<b>1.1%</b>	<b>0.9%</b>
<b>Energy for Power Generation</b>	<b>38</b>	<b>51</b>	<b>59</b>	<b>52</b>	<b>58</b>	<b>67</b>	<b>79</b>	<b>2.8%</b>	<b>1.5%</b>	<b>-1.1%</b>	<b>1.0%</b>	<b>1.4%</b>	<b>1.6%</b>
<b>Other Energy Transformation &amp; Losses</b>	<b>6</b>	<b>3</b>	<b>6</b>	<b>12</b>	<b>16</b>	<b>21</b>	<b>25</b>	<b>-6.9%</b>	<b>7.4%</b>	<b>6.8%</b>	<b>3.0%</b>	<b>2.7%</b>	<b>1.7%</b>
<b>Final consumption</b>	<b>58</b>	<b>71</b>	<b>77</b>	<b>88</b>	<b>91</b>	<b>99</b>	<b>105</b>	<b>2.0%</b>	<b>0.9%</b>	<b>1.3%</b>	<b>0.4%</b>	<b>0.9%</b>	<b>0.6%</b>
Steel, Non-Met. Minerals and Chem.	7	8	8	8	7	7	7	0.4%	0.5%	0.2%	-0.9%	-0.1%	-0.4%
Other Industry	13	17	16	20	21	24	26	2.8%	-0.8%	2.2%	0.8%	1.3%	0.7%
Non-Energy Use	4	4	5	6	6	6	6	1.2%	1.0%	1.7%	-0.2%	0.6%	0.2%
Residential	7	9	10	11	12	13	14	1.9%	1.3%	0.4%	0.7%	1.3%	0.8%
Services	3	5	7	8	10	12	14	3.8%	3.4%	1.3%	2.1%	2.2%	1.7%
Agriculture	1	2	2	2	3	3	3	2.1%	3.2%	1.1%	1.0%	0.9%	0.8%
Road	19	22	25	27	26	27	27	1.8%	1.0%	1.0%	-0.4%	0.2%	0.1%
Rail	1	1	1	1	1	1	1	0.9%	4.2%	1.0%	0.3%	0.2%	0.2%
Aviation	1	2	2	4	4	4	5	5.9%	1.8%	5.2%	1.4%	0.5%	0.3%
Other Transport	1	0	1	1	1	1	1	-3.9%	6.7%	-1.0%	1.2%	0.7%	0.4%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

<b>Australia</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>37</b>	<b>49</b>	<b>57</b>	<b>47</b>	<b>50</b>	<b>56</b>	<b>64</b>	<b>2.9%</b>	<b>1.5%</b>	<b>-1.9%</b>	<b>0.6%</b>	<b>1.0%</b>	<b>1.4%</b>
Coal	32	44	46	30	25	27	31	3.3%	0.5%	-4.0%	-2.0%	0.7%	1.5%
Oil	1	1	1	2	2	2	2	-5.7%	4.5%	7.6%	2.9%	-2.4%	-0.2%
Gas	3	4	9	14	21	24	27	1.6%	8.6%	4.0%	4.2%	1.6%	1.0%
Biomass & Waste	1	1	1	1	2	3	4	-0.2%	0.5%	5.3%	6.2%	2.9%	3.5%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>155</b>	<b>210</b>	<b>251</b>	<b>254</b>	<b>303</b>	<b>371</b>	<b>444</b>	<b>3.1%</b>	<b>1.8%</b>	<b>0.1%</b>	<b>1.8%</b>	<b>2.1%</b>	<b>1.8%</b>
Coal	121	174	181	124	104	113	131	3.7%	0.4%	-3.7%	-1.7%	0.8%	1.5%
of which CCS	0	0	0	0	0	1	7	n.s.	n.s.	n.s.	n.s.	n.s.	21.8%
Oil	4	2	4	7	9	7	7	-6.7%	9.3%	4.6%	2.8%	-2.0%	0.1%
Gas	14	16	45	64	102	128	148	1.2%	10.8%	3.5%	4.8%	2.3%	1.4%
of which CCS	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	n.s.	19.0%
Biomass & Waste	1	1	3	4	9	13	20	4.2%	9.4%	4.6%	7.5%	3.9%	4.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	2	5	11	n.s.	n.s.	n.s.	24.2%	10.2%	7.8%
Hydro	15	17	14	16	16	16	17	1.2%	-2.1%	1.4%	0.5%	0.0%	0.1%
Wind	0	0	4	27	39	56	70	n.s.	53.1%	20.6%	3.8%	3.7%	2.2%
Solar	0	0	0	13	22	31	39	14.9%	25.3%	42.7%	5.5%	3.8%	2.3%
Other	0	0	0	0	0	0	1	n.s.	n.s.	7.1%	41.2%	18.3%	14.3%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>38</b>	<b>46</b>	<b>60</b>	<b>77</b>	<b>88</b>	<b>105</b>	<b>122</b>	<b>1.9%</b>	<b>2.6%</b>	<b>2.6%</b>	<b>1.3%</b>	<b>1.8%</b>	<b>1.4%</b>
Coal	24	27	30	26	21	20	21	0.9%	1.2%	-1.3%	-2.0%	-0.5%	0.3%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	21.9%
Oil	2	4	2	2	2	1	1	9.3%	-5.9%	0.4%	0.2%	-5.5%	-0.7%
Gas	4	6	16	18	21	25	29	4.6%	10.5%	0.8%	1.5%	2.0%	1.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	19.2%
Biomass & Waste	0	0	1	1	1	2	3	4.5%	4.0%	1.7%	7.1%	3.8%	4.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	23.9%	10.0%	7.6%
Hydro	8	9	9	9	10	10	10	1.0%	-0.5%	0.7%	0.5%	0.0%	0.1%
Wind	0	0	2	11	16	23	28	n.s.	49.7%	19.9%	3.7%	3.6%	1.9%
Solar	0	0	0	9	16	23	28	13.6%	24.8%	44.9%	5.4%	3.6%	2.0%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.8%	13.8%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>58</b>	<b>71</b>	<b>77</b>	<b>88</b>	<b>91</b>	<b>99</b>	<b>105</b>	<b>2.0%</b>	<b>0.9%</b>	<b>1.3%</b>	<b>0.4%</b>	<b>0.9%</b>	<b>0.6%</b>
Coal	6	5	4	5	4	4	5	-0.4%	-2.1%	1.0%	-2.1%	1.2%	1.4%
Oil	29	35	39	45	39	36	30	1.8%	1.1%	1.5%	-1.3%	-1.0%	-1.6%
Gas	9	11	12	14	17	21	23	2.5%	1.0%	0.8%	2.1%	2.1%	1.1%
Electricity	11	15	18	19	22	28	33	2.9%	1.9%	0.4%	1.8%	2.1%	1.8%
Heat	0	0	0	0	1	1	1	0.0%	11.5%	7.3%	3.1%	3.2%	3.8%
Biomass & Other	3	4	3	6	8	10	12	2.9%	-2.3%	5.0%	3.9%	2.4%	1.8%
Share of Renewables <sup>3</sup> (%)	8%	8%	7%	13%	20%	25%	30%	0.2%	-1.8%	6.4%	4.2%	2.4%	1.8%
<b>Industry (incl. non-energy use)</b>	<b>24</b>	<b>29</b>	<b>29</b>	<b>34</b>	<b>35</b>	<b>38</b>	<b>39</b>	<b>1.9%</b>	<b>-0.2%</b>	<b>1.6%</b>	<b>0.2%</b>	<b>0.9%</b>	<b>0.4%</b>
Coal	5	5	4	5	4	4	5	-0.2%	-2.1%	1.1%	-2.1%	1.2%	1.4%
Oil	6	8	8	10	8	7	6	1.8%	0.2%	2.5%	-2.2%	-1.6%	-1.9%
Gas	6	8	8	9	11	13	14	2.1%	0.9%	1.0%	2.0%	1.9%	0.5%
Electricity	5	7	7	7	8	9	10	2.7%	0.4%	0.0%	1.4%	1.6%	1.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	2	2	3	4	4	4	5.2%	-3.3%	5.9%	2.0%	0.8%	0.9%
<b>Buildings</b>	<b>11</b>	<b>14</b>	<b>17</b>	<b>19</b>	<b>21</b>	<b>25</b>	<b>29</b>	<b>2.5%</b>	<b>2.1%</b>	<b>0.8%</b>	<b>1.4%</b>	<b>1.7%</b>	<b>1.3%</b>
Coal	0	0	0	0	0	0	0	-10.4%	-3.9%	-4.5%	-6.6%	-6.9%	-7.2%
Oil	1	1	1	1	1	2	2	0.4%	3.2%	2.9%	1.9%	1.7%	-0.5%
Gas	3	4	4	4	4	5	5	3.1%	1.3%	-0.1%	0.3%	1.0%	-0.1%
Electricity	6	8	11	11	12	14	17	3.2%	3.1%	0.4%	1.0%	1.6%	1.6%
Heat	0	0	0	0	1	1	1	0.0%	11.5%	7.3%	3.1%	3.2%	3.8%
Biomass & Other	2	2	1	2	3	4	4	0.6%	-2.9%	2.8%	4.2%	2.8%	1.6%
<b>Agriculture</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>2.1%</b>	<b>3.2%</b>	<b>1.1%</b>	<b>1.0%</b>	<b>0.9%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	2	2	2	2	2	2.2%	3.9%	0.9%	-0.4%	-0.5%	-0.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	5.4%	-0.2%	-0.3%	-0.3%
Electricity	0	0	0	0	0	0	1	2.0%	-2.0%	0.6%	3.4%	2.8%	2.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	21.6%	6.1%	3.5%
<b>Transport</b>	<b>21</b>	<b>25</b>	<b>29</b>	<b>33</b>	<b>33</b>	<b>33</b>	<b>34</b>	<b>1.9%</b>	<b>1.3%</b>	<b>1.4%</b>	<b>-0.1%</b>	<b>0.2%</b>	<b>0.1%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	21	25	28	32	28	25	21	1.8%	1.1%	1.2%	-1.2%	-1.1%	-1.7%
Gas	0	0	0	0	1	3	4	24.9%	-1.0%	13.4%	16.7%	6.6%	5.5%
Electricity	0	0	0	1	2	4	5	2.6%	5.4%	4.2%	14.3%	6.4%	3.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	1	2	3	n.s.	n.s.	7.4%	8.5%	4.6%	3.4%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>6</b>	<b>3</b>	<b>6</b>	<b>12</b>	<b>16</b>	<b>21</b>	<b>25</b>	<b>-6.9%</b>	<b>7.4%</b>	<b>6.8%</b>	<b>3.0%</b>	<b>2.7%</b>	<b>1.7%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Japan	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	122	126	127	125	120	114	107	0.3%	0.1%	-0.2%	-0.4%	-0.5%	-0.6%
GDP per capita (ppp, k\$'05)	27	29	31	33	38	44	51	0.8%	0.6%	0.7%	1.3%	1.5%	1.5%
GDP per capita (mer, k\$'05)	32	34	37	39	45	52	60	0.8%	0.6%	0.7%	1.3%	1.5%	1.5%
Share Value Added - Agriculture (%)	2	2	1	1	1	1	1	-3.3%	-2.4%	-0.5%	-0.7%	-0.6%	-0.6%
Share Value Added - Industry (%)	38	31	27	26	26	26	27	-1.9%	-1.2%	-0.5%	0.0%	0.0%	0.0%
Share Value Added - Services (%)	60	67	71	73	73	73	73	1.1%	0.6%	0.2%	0.0%	0.0%	0.0%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	23	26	-7.8%	10.3%	-2.2%	1.8%	1.8%	1.2%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	28	24	47	43	48	69	93	-1.2%	6.8%	-1.0%	1.1%	3.7%	3.1%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	1 093	1 177	1 102	970	962	929	867	0.7%	-0.7%	-1.3%	-0.1%	-0.4%	-0.7%
Total GHG (excl. sinks)	1 168	1 266	1 177	1 010	962	931	872	0.8%	-0.7%	-1.5%	-0.5%	-0.3%	-0.7%
Total GHG (energy, industry, agriculture)	1 160	1 262	1 174	1 008	949	893	848	0.8%	-0.7%	-1.5%	-0.6%	-0.6%	-0.5%
CO <sub>2</sub>	1 072	1 184	1 124	958	898	842	796	1.0%	-0.5%	-1.6%	-0.6%	-0.6%	-0.6%
CH <sub>4</sub>	32	26	21	20	20	19	18	-2.2%	-2.3%	-0.3%	-0.2%	-0.4%	-0.5%
N <sub>2</sub> O	30	28	21	19	18	17	16	-0.8%	-2.8%	-0.9%	-0.6%	-0.6%	-0.4%
F gases	26	25	9	11	13	16	18	-0.2%	-10.2%	2.5%	1.9%	1.7%	1.6%
Total GHG from Energy and Industry	1 131	1 237	1 150	984	924	869	824	0.9%	-0.7%	-1.6%	-0.6%	-0.6%	-0.5%
CO <sub>2</sub> Emissions from Fuel Comb.	986	1 099	1 057	894	837	784	742	1.1%	-0.4%	-1.7%	-0.7%	-0.6%	-0.6%
Power generation/District heating	337	386	433	362	370	371	387	1.4%	1.1%	-1.8%	0.2%	0.0%	0.4%
Industry	225	214	186	166	157	152	145	-0.5%	-1.4%	-1.1%	-0.5%	-0.3%	-0.5%
Buildings	143	177	156	120	99	85	70	2.1%	-1.3%	-2.6%	-1.9%	-1.6%	-1.9%
Agriculture	21	16	10	10	11	11	11	-2.6%	-4.3%	-0.2%	0.3%	0.4%	0.4%
Transport	213	259	229	202	169	136	101	2.0%	-1.3%	-1.2%	-1.8%	-2.2%	-2.9%
Other	47	46	43	34	31	30	28	-0.1%	-0.5%	-2.5%	-0.8%	-0.4%	-0.5%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	31.0%	4.3%	0.5%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	30.8%	4.2%	0.5%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	4.2%	0.4%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	30.7%	4.3%	0.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	76	107	101	100	115	126	137	3.5%	-0.7%	0.0%	1.4%	0.9%	0.9%
Coal	5	2	0	0	0	0	0	-9.4%	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	1	1	1	1	0	1.2%	-0.1%	0.8%	-0.5%	-1.9%	-3.4%
Natural gas	2	2	3	2	1	1	0	1.6%	3.0%	-2.9%	-3.7%	-4.6%	-6.8%
Biomass	5	6	10	12	17	21	23	1.6%	5.5%	1.9%	4.1%	1.6%	1.2%
Nuclear <sup>1</sup>	54	85	76	63	63	60	62	4.8%	-1.1%	-1.8%	0.0%	-0.5%	0.2%
Hydro	8	8	8	8	9	9	9	0.1%	-0.7%	0.3%	0.8%	0.1%	0.1%
Other renewables	3	4	3	14	24	34	43	3.4%	-0.8%	15.2%	5.3%	3.8%	2.2%
Net Imports	369	418	404	345	326	307	288						
Coal	77	100	119	118	126	130	133						
Oil	244	254	202	155	125	99	75						
Natural gas	47	64	83	68	64	61	61						
Biomass	0	0	0	4	10	14	17						
Biofuels	0	0	0	0	1	1	2						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	446	525	505	445	441	432	425	1.7%	-0.4%	-1.2%	-0.1%	-0.2%	-0.2%
Coal	82	102	119	118	126	130	133	2.2%	1.6%	-0.1%	0.7%	0.3%	0.2%
Oil	245	255	202	156	125	100	76	0.4%	-2.3%	-2.6%	-2.1%	-2.3%	-2.7%
Natural gas	49	66	86	70	66	62	61	2.9%	2.7%	-2.1%	-0.6%	-0.6%	-0.1%
Biomass	5	6	10	16	27	35	40	1.6%	5.5%	4.9%	5.7%	2.5%	1.3%
Nuclear <sup>1</sup>	54	85	76	63	63	60	62	4.8%	-1.1%	-1.8%	0.0%	-0.5%	0.2%
Hydro	8	8	8	8	9	9	9	0.1%	-0.7%	0.3%	0.8%	0.1%	0.1%
Other renewables	3	4	3	14	24	34	43	3.4%	-0.8%	15.2%	5.3%	3.8%	2.2%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	446	525	505	445	441	432	425	1.7%	-0.4%	-1.2%	-0.1%	-0.2%	-0.2%
Energy for Power Generation	176	223	230	204	216	222	236	2.4%	0.3%	-1.2%	0.6%	0.3%	0.6%
Other Energy Transformation & Losses	20	23	20	14	13	14	15	1.5%	-1.8%	-3.3%	-0.4%	0.7%	0.3%
Final consumption	316	362	342	308	302	297	286	1.4%	-0.6%	-1.0%	-0.2%	-0.2%	-0.4%
Steel, Non-Met. Minerals and Chem.	62	62	60	57	56	52	45	0.0%	-0.3%	-0.6%	-0.2%	-0.8%	-1.4%
Other Industry	52	51	42	35	36	38	40	-0.2%	-1.8%	-1.9%	0.3%	0.5%	0.5%
Non-Energy Use	39	46	45	41	41	42	43	1.5%	-0.3%	-0.8%	-0.2%	0.3%	0.2%
Residential	38	49	50	41	39	39	38	2.5%	0.2%	-2.0%	-0.4%	0.0%	-0.1%
Services	45	62	64	61	65	68	70	3.1%	0.3%	-0.3%	0.5%	0.5%	0.4%
Agriculture	7	5	3	3	3	4	4	-2.6%	-4.4%	-0.2%	0.3%	0.4%	0.4%
Road	63	78	69	61	53	46	37	2.1%	-1.2%	-1.2%	-1.4%	-1.5%	-2.3%
Rail	2	2	2	2	2	2	2	0.4%	-0.1%	-0.4%	0.6%	0.7%	0.6%
Aviation	3	4	4	4	4	5	5	2.1%	1.1%	-0.7%	0.5%	0.6%	0.4%
Other Transport	4	5	3	3	3	3	3	0.9%	-3.3%	-0.9%	-0.2%	-0.4%	-0.5%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Japan	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>111</b>	<b>125</b>	<b>143</b>	<b>118</b>	<b>121</b>	<b>119</b>	<b>123</b>	<b>1.2%</b>	<b>1.3%</b>	<b>-1.9%</b>	<b>0.2%</b>	<b>-0.2%</b>	<b>0.3%</b>
Coal	25	47	61	63	71	76	82	6.8%	2.6%	0.3%	1.2%	0.7%	0.7%
Oil	51	28	18	4	2	1	1	-5.9%	-4.1%	-14.1%	-6.8%	-7.1%	0.4%
Gas	33	47	56	42	35	27	25	3.5%	1.9%	-2.9%	-1.9%	-2.4%	-0.9%
Biomass & Waste	2	3	7	9	12	13	14	2.9%	8.6%	2.3%	3.3%	0.9%	0.6%
Other	0	0	0	1	1	1	1	6.8%	-2.4%	10.9%	4.1%	0.0%	2.1%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>842</b>	<b>1 059</b>	<b>1 118</b>	<b>1 029</b>	<b>1 128</b>	<b>1 225</b>	<b>1 318</b>	<b>2.3%</b>	<b>0.5%</b>	<b>-0.8%</b>	<b>0.9%</b>	<b>0.8%</b>	<b>0.7%</b>
Coal	116	229	299	314	361	393	427	7.0%	2.7%	0.5%	1.4%	0.9%	0.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	237	135	92	17	9	4	4	-5.4%	-3.8%	-15.4%	-6.8%	-7.2%	0.4%
Gas	179	256	301	224	187	148	134	3.7%	1.6%	-2.9%	-1.8%	-2.3%	-0.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	11	16	36	43	57	61	65	3.7%	8.8%	1.6%	2.9%	0.7%	0.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	202	322	288	247	247	239	249	4.8%	-1.1%	-1.5%	0.0%	-0.3%	0.4%
Hydro	96	97	91	94	101	102	103	0.1%	-0.7%	0.3%	0.8%	0.1%	0.1%
Wind	0	0	5	40	91	150	190	n.s.	46.9%	22.8%	8.5%	5.2%	2.4%
Solar	0	0	4	43	64	114	124	41.7%	27.0%	27.6%	3.9%	6.0%	0.8%
Other	2	3	3	7	12	14	22	6.8%	-2.4%	10.9%	4.5%	1.6%	5.0%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>227</b>	<b>261</b>	<b>286</b>	<b>332</b>	<b>370</b>	<b>418</b>	<b>432</b>	<b>1.4%</b>	<b>0.9%</b>	<b>1.5%</b>	<b>1.1%</b>	<b>1.2%</b>	<b>0.3%</b>
Coal	31	63	63	74	80	77	73	7.4%	0.1%	1.6%	0.7%	-0.3%	-0.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	78	66	56	48	39	34	32	-1.6%	-1.6%	-1.6%	-1.9%	-1.4%	-0.6%
Gas	47	37	55	54	51	41	37	-2.3%	4.1%	-0.3%	-0.6%	-2.1%	-1.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	3	3	8	7	10	10	10	1.8%	9.6%	-0.3%	2.9%	0.2%	-0.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	31	45	49	40	39	37	38	3.9%	0.8%	-2.1%	-0.2%	-0.5%	0.2%
Hydro	38	46	48	54	58	59	59	2.0%	0.4%	1.1%	0.8%	0.1%	0.1%
Wind	0	0	2	17	38	62	78	n.s.	32.7%	22.2%	8.4%	5.0%	2.3%
Solar	0	0	4	37	54	95	102	43.4%	27.1%	26.1%	3.9%	5.9%	0.7%
Other	0	1	1	1	2	2	3	7.0%	0.1%	7.2%	4.7%	1.8%	4.5%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>316</b>	<b>362</b>	<b>342</b>	<b>308</b>	<b>302</b>	<b>297</b>	<b>286</b>	<b>1.4%</b>	<b>-0.6%</b>	<b>-1.0%</b>	<b>-0.2%</b>	<b>-0.2%</b>	<b>-0.4%</b>
Coal	50	46	48	47	47	45	42	-0.8%	0.3%	-0.2%	0.1%	-0.4%	-0.7%
Oil	182	208	170	144	117	93	70	1.3%	-2.0%	-1.7%	-2.1%	-2.2%	-2.8%
Gas	15	23	34	30	33	37	39	4.2%	4.1%	-1.4%	1.0%	1.1%	0.4%
Electricity	64	81	86	80	87	95	103	2.3%	0.6%	-0.8%	0.9%	0.9%	0.7%
Heat	1	1	1	1	2	3	5	0.4%	-2.9%	1.2%	2.7%	6.6%	5.1%
Biomass & Other	3	3	3	7	16	23	27	0.2%	0.3%	10.1%	8.2%	3.8%	1.8%
Share of Renewables <sup>3</sup> (%)	5%	4%	5%	10%	17%	25%	31%	-1.2%	1.8%	7.1%	5.7%	4.0%	2.2%
<b>Industry (incl. non-energy use)</b>	<b>153</b>	<b>158</b>	<b>147</b>	<b>133</b>	<b>132</b>	<b>131</b>	<b>127</b>	<b>0.3%</b>	<b>-0.7%</b>	<b>-1.0%</b>	<b>-0.1%</b>	<b>-0.1%</b>	<b>-0.3%</b>
Coal	49	45	47	46	47	45	42	-0.7%	0.4%	-0.1%	0.1%	-0.4%	-0.7%
Oil	69	74	61	51	41	33	26	0.7%	-1.9%	-1.7%	-2.2%	-2.2%	-2.4%
Gas	4	5	8	8	13	17	19	2.9%	4.5%	0.1%	4.4%	3.2%	1.1%
Electricity	29	31	28	24	27	29	32	0.7%	-1.0%	-1.7%	1.2%	1.0%	0.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	3	3	3	3	5	7	8	0.4%	0.4%	2.0%	4.3%	3.0%	1.9%
<b>Buildings</b>	<b>83</b>	<b>110</b>	<b>113</b>	<b>102</b>	<b>104</b>	<b>107</b>	<b>109</b>	<b>2.8%</b>	<b>0.3%</b>	<b>-1.0%</b>	<b>0.1%</b>	<b>0.3%</b>	<b>0.2%</b>
Coal	1	1	1	0	0	0	0	-4.4%	-1.6%	-1.6%	-2.3%	-2.6%	-2.9%
Oil	36	42	29	22	18	15	12	1.6%	-3.6%	-2.9%	-2.1%	-1.7%	-2.3%
Gas	11	18	26	21	18	16	14	4.7%	4.0%	-2.1%	-1.6%	-1.4%	-1.4%
Electricity	34	48	56	54	57	60	64	3.6%	1.5%	-0.4%	0.5%	0.6%	0.6%
Heat	1	1	1	1	2	3	5	0.4%	-2.9%	1.2%	2.7%	6.6%	5.1%
Biomass & Other	0	0	0	3	9	13	14	-11.2%	-20.8%	n.s.	10.6%	3.5%	1.3%
<b>Agriculture</b>	<b>7</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>-2.6%</b>	<b>-4.4%</b>	<b>-0.2%</b>	<b>0.3%</b>	<b>0.4%</b>	<b>0.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	7	5	3	3	3	3	4	-2.6%	-4.3%	-0.2%	0.3%	0.4%	0.4%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	-0.3%	-5.7%	0.6%	0.6%	0.7%	0.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>72</b>	<b>88</b>	<b>78</b>	<b>70</b>	<b>63</b>	<b>55</b>	<b>46</b>	<b>2.0%</b>	<b>-1.2%</b>	<b>-1.1%</b>	<b>-1.1%</b>	<b>-1.2%</b>	<b>-1.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	71	87	77	67	55	42	29	2.0%	-1.2%	-1.3%	-2.1%	-2.5%	-3.6%
Gas	0	0	0	0	2	4	6	n.s.	n.s.	n.s.	18.0%	5.1%	3.2%
Electricity	1	2	2	2	4	6	7	1.0%	0.2%	0.7%	8.5%	4.1%	1.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	2	3	4	n.s.	n.s.	n.s.	12.6%	7.4%	3.2%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>20</b>	<b>23</b>	<b>20</b>	<b>14</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>1.5%</b>	<b>-1.8%</b>	<b>-3.3%</b>	<b>-0.4%</b>	<b>0.7%</b>	<b>0.3%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

<b>Korea (Rep.)</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	43	46	49	51	53	52	51	0.7%	0.6%	0.4%	0.2%	0.0%	-0.3%
GDP per capita (ppp, k\$'05)	11	19	27	34	44	51	57	5.3%	3.5%	2.5%	2.4%	1.5%	1.1%
GDP per capita (mer, k\$'05)	9	15	22	29	36	42	47	5.8%	3.8%	2.5%	2.4%	1.5%	1.1%
Share Value Added - Agriculture (%)	9	5	3	3	3	2	2	-6.4%	-5.5%	-0.2%	-0.3%	-0.2%	-0.1%
Share Value Added - Industry (%)	42	38	39	37	34	32	30	-0.9%	0.2%	-0.4%	-0.8%	-0.7%	-0.5%
Share Value Added - Services (%)	49	57	59	60	63	65	67	1.5%	0.2%	0.3%	0.5%	0.4%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	23	26	-7.8%	10.3%	-2.2%	1.8%	1.8%	1.2%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	28	24	47	43	48	69	93	-1.2%	6.8%	-1.0%	1.1%	3.7%	3.1%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
<b>Total GHG</b>	<b>282</b>	<b>510</b>	<b>628</b>	<b>663</b>	<b>582</b>	<b>516</b>	<b>452</b>	<b>6.1%</b>	<b>2.1%</b>	<b>0.5%</b>	<b>-1.3%</b>	<b>-1.2%</b>	<b>-1.3%</b>
<b>Total GHG (excl. sinks)</b>	<b>309</b>	<b>537</b>	<b>662</b>	<b>697</b>	<b>614</b>	<b>540</b>	<b>477</b>	<b>5.7%</b>	<b>2.1%</b>	<b>0.5%</b>	<b>-1.3%</b>	<b>-1.3%</b>	<b>-1.2%</b>
<b>Total GHG (energy, industry, agriculture)</b>	<b>309</b>	<b>536</b>	<b>660</b>	<b>691</b>	<b>605</b>	<b>538</b>	<b>477</b>	<b>5.7%</b>	<b>2.1%</b>	<b>0.5%</b>	<b>-1.3%</b>	<b>-1.2%</b>	<b>-1.2%</b>
CO <sub>2</sub>	261	476	607	639	557	488	430	6.2%	2.5%	0.5%	-1.4%	-1.3%	-1.3%
CH <sub>4</sub>	31	31	32	31	30	32	30	-0.1%	0.3%	-0.2%	-0.2%	0.5%	-0.5%
N <sub>2</sub> O	11	16	13	14	13	13	13	4.3%	-2.0%	0.8%	-0.7%	0.0%	-0.5%
F gases	6	13	8	7	5	5	4	7.5%	-4.7%	-1.6%	-3.3%	0.1%	-0.8%
<b>Total GHG from Energy and Industry</b>	<b>289</b>	<b>519</b>	<b>640</b>	<b>667</b>	<b>581</b>	<b>512</b>	<b>451</b>	<b>6.0%</b>	<b>2.1%</b>	<b>0.4%</b>	<b>-1.4%</b>	<b>-1.3%</b>	<b>-1.3%</b>
<b>CO<sub>2</sub> Emissions from Fuel Comb.</b>	<b>237</b>	<b>434</b>	<b>571</b>	<b>598</b>	<b>518</b>	<b>451</b>	<b>396</b>	<b>6.2%</b>	<b>2.8%</b>	<b>0.5%</b>	<b>-1.4%</b>	<b>-1.4%</b>	<b>-1.3%</b>
Power generation/District heating	42	133	264	252	190	142	126	12.1%	7.1%	-0.5%	-2.8%	-2.8%	-1.2%
Industry	64	112	123	151	140	136	122	5.8%	0.9%	2.1%	-0.7%	-0.3%	-1.0%
Buildings	69	65	55	52	52	51	46	-0.6%	-1.7%	-0.5%	0.1%	-0.2%	-1.0%
Agriculture	5	10	7	6	5	4	3	7.5%	-3.7%	-1.4%	-1.8%	-2.2%	-2.5%
Transport	44	80	91	105	105	98	84	6.2%	1.2%	1.5%	-0.1%	-0.7%	-1.5%
Other	13	33	32	32	26	20	15	10.0%	-0.5%	0.1%	-2.1%	-2.4%	-3.0%
<b>CO<sub>2</sub> captured (CCS)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>7</b>	<b>24</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>29.7%</b>	<b>21.9%</b>	<b>13.9%</b>
Coal	0	0	0	0	1	6	23	n.s.	n.s.	n.s.	32.1%	22.6%	14.1%
Gas	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	20.8%	17.4%	10.8%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	16.8%	2.1%	10.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
<b>Primary Production</b>	<b>25</b>	<b>37</b>	<b>49</b>	<b>75</b>	<b>120</b>	<b>154</b>	<b>162</b>	<b>4.0%</b>	<b>2.7%</b>	<b>4.4%</b>	<b>4.8%</b>	<b>2.5%</b>	<b>0.5%</b>
Coal	8	4	1	1	0	0	0	-6.5%	-12.7%	-4.7%	-4.8%	-1.9%	0.6%
Oil	0	1	1	0	0	0	0	n.s.	0.4%	n.s.	n.s.	n.s.	n.s.
Natural gas	0	0	0	1	1	1	1	n.s.	n.s.	3.0%	3.9%	1.9%	-1.5%
Biomass	3	3	7	8	9	8	8	2.2%	7.5%	2.4%	0.3%	-0.8%	0.4%
Nuclear <sup>1</sup>	14	29	39	62	103	131	134	7.5%	3.1%	4.7%	5.1%	2.5%	0.2%
Hydro	1	0	1	1	1	1	1	-1.2%	1.4%	2.9%	0.6%	0.2%	0.1%
Other renewables	0	0	0	2	7	13	18	15.8%	14.6%	30.1%	11.1%	6.7%	3.2%
<b>Net Imports</b>	<b>70</b>	<b>156</b>	<b>208</b>	<b>227</b>	<b>208</b>	<b>189</b>	<b>174</b>						
Coal	17	40	75	75	48	41	43						
Oil	50	98	94	106	97	84	67						
Natural gas	3	17	38	45	61	61	60						
Biomass	0	0	0	1	0	0	0						
Biofuels	0	0	0	0	1	3	4						
Electricity	0	0	0	0	0	0	0						
<b>Primary Energy Demand<sup>2</sup></b>	<b>95</b>	<b>193</b>	<b>257</b>	<b>302</b>	<b>328</b>	<b>343</b>	<b>336</b>	<b>7.4%</b>	<b>2.9%</b>	<b>1.6%</b>	<b>0.9%</b>	<b>0.4%</b>	<b>-0.2%</b>
Coal	25	44	76	76	49	42	43	6.1%	5.5%	-0.1%	-4.3%	-1.6%	0.4%
Oil	50	99	95	106	97	84	67	7.0%	-0.4%	1.1%	-0.9%	-1.5%	-2.2%
Natural gas	3	17	39	45	62	62	61	20.1%	8.5%	1.6%	3.2%	0.0%	-0.2%
Biomass	3	3	7	9	9	8	8	2.2%	7.4%	2.9%	-0.1%	-0.9%	0.4%
Nuclear <sup>1</sup>	14	29	39	62	103	131	134	7.5%	3.1%	4.7%	5.1%	2.5%	0.2%
Hydro	1	0	1	1	1	1	1	-1.2%	1.4%	2.9%	0.6%	0.2%	0.1%
Other renewables	0	0	0	2	7	13	18	15.8%	14.6%	30.1%	11.1%	6.7%	3.2%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
<b>Primary Energy Demand</b>	<b>95</b>	<b>193</b>	<b>257</b>	<b>302</b>	<b>328</b>	<b>343</b>	<b>336</b>	<b>7.4%</b>	<b>2.9%</b>	<b>1.6%</b>	<b>0.9%</b>	<b>0.4%</b>	<b>-0.2%</b>
<b>Energy for Power Generation</b>	<b>27</b>	<b>67</b>	<b>115</b>	<b>140</b>	<b>172</b>	<b>194</b>	<b>201</b>	<b>9.5%</b>	<b>5.6%</b>	<b>2.0%</b>	<b>2.1%</b>	<b>1.2%</b>	<b>0.4%</b>
<b>Other Energy Transformation &amp; Losses</b>	<b>5</b>	<b>18</b>	<b>16</b>	<b>15</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>12.5%</b>	<b>-1.1%</b>	<b>-0.2%</b>	<b>-0.8%</b>	<b>0.6%</b>	<b>0.6%</b>
<b>Final consumption</b>	<b>71</b>	<b>135</b>	<b>169</b>	<b>200</b>	<b>209</b>	<b>215</b>	<b>207</b>	<b>6.7%</b>	<b>2.3%</b>	<b>1.7%</b>	<b>0.5%</b>	<b>0.3%</b>	<b>-0.3%</b>
Steel, Non-Met. Minerals and Chem.	13	25	32	37	30	26	22	6.5%	2.7%	1.4%	-2.1%	-1.5%	-1.8%
Other Industry	11	21	24	30	35	39	39	7.2%	1.1%	2.2%	1.8%	0.9%	0.1%
Non-Energy Use	7	25	38	48	47	46	42	14.0%	4.4%	2.2%	-0.2%	-0.1%	-0.9%
Residential	14	15	20	21	21	21	20	0.7%	2.9%	0.2%	0.2%	0.0%	-0.5%
Services	10	18	21	26	34	40	42	6.4%	1.6%	2.0%	2.9%	1.5%	0.6%
Agriculture	2	4	3	3	4	4	5	8.1%	-1.8%	0.6%	1.5%	1.1%	0.9%
Road	11	22	28	33	35	36	35	7.7%	2.5%	1.6%	0.6%	0.3%	-0.3%
Rail	0	0	0	0	0	0	0	2.9%	-2.7%	0.1%	1.5%	0.8%	0.3%
Aviation	2	3	1	2	2	2	2	3.9%	-11.6%	7.3%	1.3%	0.8%	0.1%
Other Transport	2	1	1	0	0	0	0	-1.4%	-6.1%	-10.4%	0.8%	-0.4%	-1.2%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%



<b>Korea (Rep.)</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>12</b>	<b>37</b>	<b>75</b>	<b>74</b>	<b>62</b>	<b>48</b>	<b>48</b>	<b>11.7%</b>	<b>7.2%</b>	<b>-0.1%</b>	<b>-1.8%</b>	<b>-2.5%</b>	<b>0.0%</b>
Coal	6	24	52	47	27	21	22	15.2%	8.1%	-1.1%	-5.1%	-2.7%	0.7%
Oil	5	8	5	5	5	4	3	5.4%	-4.7%	1.2%	-1.3%	-2.8%	-1.8%
Gas	2	6	18	21	28	22	21	10.9%	12.0%	1.8%	2.8%	-2.3%	-0.7%
Biomass & Waste	0	0	0	1	2	2	2	n.s.	34.9%	10.3%	4.6%	-0.4%	3.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>105</b>	<b>290</b>	<b>499</b>	<b>622</b>	<b>786</b>	<b>910</b>	<b>980</b>	<b>10.7%</b>	<b>5.6%</b>	<b>2.2%</b>	<b>2.4%</b>	<b>1.5%</b>	<b>0.7%</b>
Coal	18	111	219	215	131	102	112	20.2%	7.0%	-0.2%	-4.9%	-2.4%	0.9%
of which CCS	0	0	0	0	0	5	28	n.s.	n.s.	n.s.	n.s.	n.s.	18.2%
Oil	19	35	19	23	20	15	13	6.3%	-5.8%	1.8%	-1.2%	-2.7%	-1.7%
Gas	10	29	103	105	142	114	112	11.9%	13.4%	0.2%	3.0%	-2.2%	-0.1%
of which CCS	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	n.s.	13.8%
Biomass & Waste	0	0	1	3	5	5	9	n.s.	28.1%	10.2%	4.6%	1.0%	6.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	53	109	149	241	406	524	536	7.5%	3.2%	4.9%	5.4%	2.6%	0.2%
Hydro	6	6	6	9	9	9	9	-1.2%	1.4%	2.9%	0.6%	0.2%	0.1%
Wind	0	0	1	17	57	107	129	n.s.	48.1%	34.6%	13.0%	6.5%	1.9%
Solar	0	0	1	9	17	33	56	17.5%	n.s.	28.2%	6.1%	6.9%	5.6%
Other	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	28.9%	16.9%	11.8%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>20</b>	<b>49</b>	<b>77</b>	<b>137</b>	<b>190</b>	<b>233</b>	<b>245</b>	<b>9.4%</b>	<b>4.6%</b>	<b>5.9%</b>	<b>3.3%</b>	<b>2.1%</b>	<b>0.5%</b>
Coal	4	14	28	36	33	31	20	14.3%	7.1%	2.4%	-0.6%	-0.7%	-4.1%
of which CCS	0	0	0	0	0	1	4	n.s.	n.s.	n.s.	n.s.	n.s.	18.7%
Oil	4	4	4	6	6	6	7	2.1%	0.0%	2.8%	0.5%	0.3%	0.6%
Gas	3	13	20	41	53	52	47	17.5%	4.6%	7.6%	2.5%	-0.3%	-0.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	14.2%
Biomass & Waste	0	1	0	1	1	1	2	n.s.	-12.0%	22.9%	-1.9%	-1.0%	4.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	8	14	18	32	52	66	66	6.1%	2.6%	5.9%	5.2%	2.4%	0.0%
Hydro	2	3	6	7	7	7	8	3.0%	5.8%	2.2%	0.5%	0.2%	0.1%
Wind	0	0	0	7	24	44	53	n.s.	40.3%	34.0%	12.8%	6.3%	1.8%
Solar	0	0	1	7	13	25	42	n.s.	n.s.	26.8%	6.0%	6.9%	5.6%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	28.2%	16.4%	11.3%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>71</b>	<b>135</b>	<b>169</b>	<b>200</b>	<b>209</b>	<b>215</b>	<b>207</b>	<b>6.7%</b>	<b>2.3%</b>	<b>1.7%</b>	<b>0.5%</b>	<b>0.3%</b>	<b>-0.3%</b>
Coal	16	15	18	22	17	17	17	-0.5%	1.9%	2.3%	-2.9%	0.0%	0.2%
Oil	44	80	82	92	85	73	58	6.2%	0.2%	1.2%	-0.9%	-1.4%	-2.3%
Gas	1	11	21	24	34	40	40	32.1%	6.5%	1.6%	3.5%	1.6%	0.1%
Electricity	8	23	39	48	61	71	76	10.8%	5.5%	2.3%	2.4%	1.5%	0.7%
Heat	0	3	4	5	5	5	6	n.s.	2.8%	0.5%	0.1%	0.7%	1.2%
Biomass & Other	3	3	6	8	8	9	10	2.1%	6.4%	2.9%	-0.1%	1.1%	0.9%
Share of Renewables <sup>3</sup> (%)	5%	3%	5%	7%	10%	15%	19%	-3.3%	3.9%	3.3%	3.3%	4.1%	3.0%
<b>Industry (incl. non-energy use)</b>	<b>31</b>	<b>71</b>	<b>94</b>	<b>115</b>	<b>112</b>	<b>111</b>	<b>103</b>	<b>8.8%</b>	<b>2.9%</b>	<b>2.0%</b>	<b>-0.2%</b>	<b>-0.1%</b>	<b>-0.7%</b>
Coal	7	14	17	22	17	17	17	8.1%	1.7%	2.6%	-2.7%	0.1%	0.3%
Oil	18	36	44	50	44	36	28	7.4%	2.0%	1.4%	-1.3%	-1.9%	-2.7%
Gas	0	3	7	11	18	23	24	44.4%	9.4%	4.3%	5.5%	2.4%	0.2%
Electricity	5	13	20	24	27	30	31	10.0%	4.3%	2.2%	1.0%	1.0%	0.4%
Heat	0	2	2	2	2	2	2	n.s.	1.0%	-2.0%	-0.2%	-0.3%	-0.2%
Biomass & Other	1	3	5	6	4	3	2	8.2%	5.1%	2.0%	-2.9%	-4.3%	-5.0%
<b>Buildings</b>	<b>24</b>	<b>33</b>	<b>41</b>	<b>46</b>	<b>55</b>	<b>61</b>	<b>62</b>	<b>3.3%</b>	<b>2.2%</b>	<b>1.2%</b>	<b>1.8%</b>	<b>0.9%</b>	<b>0.2%</b>
Coal	9	1	1	1	0	0	0	-24.1%	4.5%	-3.1%	-9.6%	-9.9%	-10.1%
Oil	10	14	7	7	6	5	5	3.3%	-6.7%	-0.5%	-0.9%	-0.9%	-1.5%
Gas	1	8	12	12	14	14	13	29.6%	4.5%	-0.2%	1.3%	0.3%	-0.8%
Electricity	3	9	18	22	31	36	39	11.9%	7.1%	2.2%	3.2%	1.6%	0.8%
Heat	0	1	2	3	3	3	4	n.s.	5.5%	2.7%	0.3%	1.3%	2.0%
Biomass & Other	1	0	1	2	2	2	1	-11.3%	10.2%	5.8%	-0.5%	-0.2%	-2.3%
<b>Agriculture</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>8.1%</b>	<b>-1.8%</b>	<b>0.6%</b>	<b>1.5%</b>	<b>1.1%</b>	<b>0.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	3	2	2	2	1	1	7.5%	-3.7%	-1.4%	-1.8%	-2.2%	-2.5%
Gas	0	0	0	0	0	0	0	n.s.	-9.6%	2.9%	-1.1%	-1.5%	-1.8%
Electricity	0	0	1	1	2	2	3	13.8%	6.6%	4.0%	4.0%	2.7%	2.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	15.9%	5.1%	2.8%
<b>Transport</b>	<b>15</b>	<b>27</b>	<b>30</b>	<b>36</b>	<b>38</b>	<b>39</b>	<b>38</b>	<b>6.3%</b>	<b>1.2%</b>	<b>1.6%</b>	<b>0.7%</b>	<b>0.3%</b>	<b>-0.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	15	27	29	34	33	30	25	6.3%	0.7%	1.6%	-0.2%	-0.9%	-1.9%
Gas	0	0	1	1	2	2	3	n.s.	n.s.	0.5%	4.5%	3.6%	3.8%
Electricity	0	0	0	0	2	3	4	7.2%	0.7%	4.5%	17.8%	5.9%	3.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	2	4	6	n.s.	n.s.	2.6%	15.2%	9.1%	4.5%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>5</b>	<b>18</b>	<b>16</b>	<b>15</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>12.5%</b>	<b>-1.1%</b>	<b>-0.2%</b>	<b>-0.8%</b>	<b>0.6%</b>	<b>0.6%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



New Zealand	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	3	4	4	5	5	5	6	1.3%	1.3%	0.8%	0.8%	0.6%	0.4%
GDP per capita (ppp, k\$'05)	19	23	25	30	34	39	45	1.7%	1.1%	1.6%	1.4%	1.4%	1.5%
GDP per capita (mer, k\$'05)	21	24	28	33	38	43	50	1.7%	1.3%	1.7%	1.4%	1.4%	1.5%
Share Value Added - Agriculture (%)	5	4	2	2	2	2	2	-1.8%	-6.8%	-0.4%	-0.7%	-0.6%	-0.5%
Share Value Added - Industry (%)	31	27	27	27	26	24	23	-1.4%	0.1%	0.0%	-0.4%	-0.5%	-0.6%
Share Value Added - Services (%)	64	69	71	71	72	74	75	0.8%	0.3%	0.0%	0.2%	0.2%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	23	26	-7.8%	10.3%	-2.2%	1.8%	1.8%	1.2%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	28	24	47	43	48	69	93	-1.2%	6.8%	-1.0%	1.1%	3.7%	3.1%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	24	41	43	57	60	63	64	5.6%	0.6%	2.9%	0.5%	0.5%	0.1%
Total GHG (excl. sinks)	61	73	75	82	84	88	90	1.9%	0.2%	0.9%	0.3%	0.5%	0.2%
Total GHG (energy, industry, agriculture)	61	73	75	82	84	88	90	1.9%	0.2%	0.9%	0.3%	0.5%	0.2%
CO <sub>2</sub>	25	34	35	39	39	41	42	2.9%	0.4%	1.2%	0.1%	0.5%	0.1%
CH <sub>4</sub>	27	29	28	30	31	32	33	1.0%	-0.3%	0.4%	0.4%	0.4%	0.2%
N <sub>2</sub> O	8	10	10	11	11	12	12	1.7%	0.6%	0.6%	0.2%	0.2%	0.2%
F gases	1	0	1	2	2	3	3	-6.7%	13.5%	5.0%	2.2%	1.9%	1.7%
Total GHG from Energy and Industry	30	39	41	46	47	50	51	2.6%	0.5%	1.2%	0.2%	0.5%	0.2%
CO <sub>2</sub> Emissions from Fuel Comb.	24	32	32	35	35	37	37	3.0%	0.1%	1.0%	-0.1%	0.5%	0.1%
Power generation/District heating	4	6	6	4	4	6	7	5.1%	0.2%	-4.3%	-0.2%	3.9%	2.6%
Industry	7	9	7	12	13	13	13	1.9%	-2.0%	5.1%	0.7%	0.3%	-0.2%
Buildings	1	1	1	1	2	2	2	0.7%	-0.2%	-1.8%	2.8%	2.1%	0.8%
Agriculture	1	2	1	2	2	2	2	2.2%	-0.6%	1.6%	0.8%	0.7%	0.7%
Transport	9	12	14	14	12	11	10	3.4%	1.3%	0.3%	-1.3%	-1.0%	-1.2%
Other	1	2	2	2	2	3	3	2.4%	1.3%	1.5%	0.5%	0.6%	0.3%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	13	15	19	23	18	17	18	1.8%	2.0%	2.1%	-2.3%	-0.7%	0.9%
Coal	1	2	3	4	3	3	3	4.5%	3.8%	0.5%	-1.4%	-0.2%	-0.3%
Oil	3	2	3	4	2	1	0	-2.7%	3.2%	4.3%	-5.6%	-11.9%	-16.9%
Natural gas	4	5	4	4	3	3	2	2.5%	-2.6%	-1.0%	-1.3%	-1.1%	-1.5%
Biomass	1	1	1	1	1	2	2	4.0%	0.7%	1.6%	0.3%	1.6%	1.6%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	5.7%
Hydro	2	2	2	2	2	2	2	0.5%	0.1%	-0.4%	0.8%	0.0%	0.0%
Other renewables	2	3	5	8	6	7	9	3.2%	7.4%	4.6%	-3.1%	1.0%	3.0%
Net Imports	1	3	1	2	5	8	9						
Coal	0	-1	-2	-2	-2	-1	-1						
Oil	2	4	3	3	4	5	5						
Natural gas	-1	0	0	1	3	4	5						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	13	18	20	25	23	24	27	2.9%	1.1%	2.1%	-0.7%	0.7%	1.1%
Coal	1	1	2	2	1	2	2	-0.3%	2.4%	1.7%	-2.2%	0.7%	1.3%
Oil	4	6	6	7	6	6	5	2.7%	0.7%	1.1%	-1.1%	-0.6%	-0.9%
Natural gas	3	5	4	4	6	7	7	5.0%	-3.0%	1.8%	2.8%	1.5%	0.7%
Biomass	1	1	1	1	1	2	2	4.0%	0.7%	0.3%	0.6%	1.7%	1.8%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	5.7%
Hydro	2	2	2	2	2	2	2	0.5%	0.1%	-0.4%	0.8%	0.0%	0.0%
Other renewables	2	3	5	8	6	7	9	3.2%	7.4%	4.6%	-3.1%	1.0%	3.0%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	13	18	20	25	23	24	27	2.9%	1.1%	2.1%	-0.7%	0.7%	1.1%
Energy for Power Generation	6	7	10	12	10	11	14	2.8%	3.4%	1.8%	-2.0%	1.2%	2.4%
Other Energy Transformation & Losses	0	0	0	0	1	1	1	0.5%	-8.2%	10.5%	5.6%	1.8%	0.2%
Final consumption	10	13	13	16	16	17	18	2.8%	-0.1%	1.8%	0.4%	0.5%	0.3%
Steel, Non-Met. Minerals and Chem.	1	1	1	2	2	1	1	0.4%	-2.5%	4.4%	-0.1%	-1.0%	-1.4%
Other Industry	3	3	3	4	5	5	5	2.1%	0.3%	2.3%	1.1%	1.2%	0.7%
Non-Energy Use	1	2	1	2	2	2	2	10.3%	-5.8%	7.4%	0.5%	0.0%	-0.2%
Residential	1	1	2	1	1	2	2	1.1%	1.0%	-0.9%	0.5%	1.1%	1.0%
Services	1	1	1	1	1	2	2	1.7%	2.0%	-0.1%	1.6%	1.7%	1.6%
Agriculture	0	1	1	1	1	1	1	2.8%	0.3%	1.6%	0.9%	0.8%	0.8%
Road	3	3	4	4	4	4	4	3.0%	1.7%	0.5%	-0.8%	-0.4%	-0.6%
Rail	0	0	0	0	0	0	0	10.4%	-4.9%	0.9%	0.3%	0.3%	0.3%
Aviation	0	0	0	0	0	0	0	2.4%	-1.6%	-1.1%	1.8%	1.6%	1.4%
Other Transport	0	0	0	0	0	0	0	4.7%	-3.9%	2.5%	1.1%	0.5%	0.5%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

New Zealand	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>4.4%</b>	<b>0.9%</b>	<b>-3.7%</b>	<b>-0.9%</b>	<b>3.1%</b>	<b>2.8%</b>
Coal	0	0	0	1	0	1	1	8.2%	2.7%	2.7%	-3.0%	4.4%	3.1%
Oil	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-20.5%	6.0%	0.4%
Gas	1	2	2	1	1	1	1	4.3%	-0.7%	-10.5%	3.9%	3.3%	2.2%
Biomass & Waste	0	0	0	0	0	0	0	1.3%	0.2%	-16.9%	-3.8%	14.7%	4.8%
Other	0	0	1	1	0	1	1	3.2%	7.2%	4.0%	-4.1%	0.6%	3.3%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>32</b>	<b>39</b>	<b>44</b>	<b>45</b>	<b>49</b>	<b>56</b>	<b>64</b>	<b>2.0%</b>	<b>1.2%</b>	<b>0.2%</b>	<b>0.9%</b>	<b>1.3%</b>	<b>1.3%</b>
Coal	1	2	2	3	2	3	4	8.8%	2.9%	2.2%	-3.4%	4.4%	3.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	n.s.	n.s.	39.6%	-20.4%	5.9%	0.2%
Gas	6	10	10	3	5	7	9	5.3%	0.4%	-10.7%	4.5%	3.5%	2.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	1	1	1	0	0	0	0	1.6%	0.2%	-16.6%	-1.7%	14.0%	5.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	23	24	25	24	26	26	26	0.5%	0.1%	-0.4%	0.8%	0.0%	0.0%
Wind	0	0	1	7	11	13	15	n.s.	25.4%	19.0%	4.9%	2.4%	1.1%
Solar	0	0	0	0	0	1	2	n.s.	n.s.	44.7%	13.3%	8.7%	6.8%
Other	2	3	6	9	6	6	9	3.2%	7.2%	4.0%	-4.1%	0.7%	3.4%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>7</b>	<b>8</b>	<b>10</b>	<b>13</b>	<b>18</b>	<b>21</b>	<b>23</b>	<b>0.8%</b>	<b>1.9%</b>	<b>3.2%</b>	<b>3.1%</b>	<b>1.5%</b>	<b>1.2%</b>
Coal	1	1	1	0	0	1	1	-1.0%	-4.8%	-0.2%	-0.8%	3.6%	2.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	n.s.	n.s.	-0.3%	1.0%	-0.6%	-0.1%
Gas	1	1	2	2	3	4	5	2.7%	4.4%	0.0%	4.3%	2.4%	0.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	0	0	0.9%	8.9%	0.5%	1.3%	-5.1%	1.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	5	5	5	5	6	6	6	0.9%	0.1%	0.1%	0.8%	0.0%	0.0%
Wind	0	0	1	3	4	5	6	n.s.	30.8%	16.9%	5.2%	2.6%	1.1%
Solar	0	0	0	0	1	1	3	n.s.	n.s.	46.6%	14.6%	8.9%	6.9%
Other	0	0	1	2	3	3	3	3.4%	7.1%	11.6%	3.6%	-0.5%	0.1%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>10</b>	<b>13</b>	<b>13</b>	<b>16</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>2.8%</b>	<b>-0.1%</b>	<b>1.8%</b>	<b>0.4%</b>	<b>0.5%</b>	<b>0.3%</b>
Coal	1	1	1	1	1	1	1	-2.3%	1.9%	1.5%	-1.1%	-0.8%	0.0%
Oil	4	5	6	6	6	5	5	2.8%	1.0%	0.6%	-1.1%	-0.6%	-0.9%
Gas	2	3	2	4	5	5	5	5.3%	-5.4%	7.3%	2.5%	1.2%	0.2%
Electricity	2	3	3	3	4	4	5	2.0%	1.3%	0.3%	1.0%	1.4%	1.4%
Heat	0	0	0	0	0	0	0	1.4%	1.6%	-0.1%	0.2%	-0.2%	0.6%
Biomass & Other	1	1	1	1	1	1	2	4.5%	0.7%	1.1%	0.5%	1.0%	1.2%
Share of Renewables <sup>3</sup> (%)	29%	28%	29%	31%	35%	38%	43%	-0.4%	0.6%	0.6%	1.2%	0.9%	1.1%
<b>Industry (incl. non-energy use)</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>8</b>	<b>8</b>	<b>9</b>	<b>9</b>	<b>3.2%</b>	<b>-1.7%</b>	<b>3.8%</b>	<b>0.7%</b>	<b>0.5%</b>	<b>0.1%</b>
Coal	1	1	1	1	1	1	1	-2.0%	2.1%	1.9%	-1.1%	-0.8%	0.0%
Oil	1	1	1	1	1	1	1	1.0%	1.0%	2.5%	0.3%	0.8%	0.0%
Gas	2	3	1	3	4	4	4	5.8%	-6.1%	8.5%	1.8%	0.7%	-0.2%
Electricity	1	1	1	1	1	2	2	2.3%	0.0%	1.1%	0.7%	1.3%	1.2%
Heat	0	0	0	0	0	0	0	2.1%	0.7%	0.0%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	1	1	1	1	1	1	5.6%	0.9%	0.4%	-1.2%	-1.0%	-0.2%
<b>Buildings</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>1.4%</b>	<b>1.5%</b>	<b>-0.5%</b>	<b>1.0%</b>	<b>1.4%</b>	<b>1.3%</b>
Coal	0	0	0	0	0	0	0	-5.8%	-4.0%	-4.2%	-2.3%	-2.6%	-2.9%
Oil	0	0	0	0	0	0	0	0.6%	1.7%	-0.2%	1.1%	1.0%	-0.1%
Gas	0	0	0	0	0	0	1	5.6%	-0.5%	-3.0%	5.6%	3.4%	1.5%
Electricity	1	2	2	2	2	2	2	1.5%	2.0%	-0.4%	0.2%	0.9%	1.3%
Heat	0	0	0	0	0	0	0	-0.4%	3.8%	-0.4%	1.0%	0.0%	2.1%
Biomass & Other	0	0	0	0	0	0	0	0.1%	-0.5%	2.0%	3.7%	3.1%	2.2%
<b>Agriculture</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2.8%</b>	<b>0.3%</b>	<b>1.6%</b>	<b>0.9%</b>	<b>0.8%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	0	0	4.6%	12.4%	-1.2%	0.0%	0.0%	0.0%
Oil	0	0	0	0	1	1	1	2.3%	-1.4%	2.0%	0.8%	0.8%	0.8%
Gas	0	0	0	0	0	0	0	0.5%	-3.5%	1.0%	0.6%	0.6%	0.6%
Electricity	0	0	0	0	0	0	0	6.6%	4.2%	1.2%	1.2%	1.1%	1.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>3.1%</b>	<b>1.2%</b>	<b>0.4%</b>	<b>-0.6%</b>	<b>-0.2%</b>	<b>-0.4%</b>
Coal	0	0	0	0	0	0	0	0.0%	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	4	5	5	4	3	3	3.3%	1.2%	0.2%	-1.7%	-1.3%	-1.5%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	17.6%	4.1%	2.5%
Electricity	0	0	0	0	0	0	0	1.8%	-1.1%	17.7%	23.4%	5.6%	2.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	31.0%	10.2%	6.0%	3.5%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0.5%</b>	<b>-8.2%</b>	<b>10.5%</b>	<b>5.6%</b>	<b>1.8%</b>	<b>0.2%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Rest Pacific	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	6	8	9	11	13	15	17	2.3%	2.0%	1.8%	1.6%	1.4%	1.1%
GDP per capita (ppp, k\$'05)	2	2	2	3	4	6	9	1.2%	1.1%	3.1%	2.7%	3.9%	4.3%
GDP per capita (mer, k\$'05)	1	1	1	2	2	3	5	1.0%	1.0%	3.1%	2.7%	3.9%	4.3%
Share Value Added - Agriculture (%)	5	4	2	1	0	0	0	-1.8%	-6.8%	-10.3%	-10.0%	-10.7%	-7.9%
Share Value Added - Industry (%)	31	27	27	28	28	27	27	-1.4%	0.1%	0.4%	0.0%	-0.1%	-0.3%
Share Value Added - Services (%)	64	69	71	71	72	72	73	0.8%	0.3%	0.1%	0.1%	0.1%	0.1%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	23	26	-7.8%	10.3%	-2.2%	1.8%	1.8%	1.2%
Oil	33	32	72	66	96	134	181	-0.2%	8.4%	-0.9%	3.8%	3.4%	3.1%
Gas	28	24	47	43	48	69	93	-1.2%	6.8%	-1.0%	1.1%	3.7%	3.1%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	110	96	102	120	134	154	185	-1.4%	0.6%	1.6%	1.2%	1.4%	1.8%
Total GHG (excl. sinks)	110	96	102	120	134	154	185	-1.4%	0.6%	1.6%	1.2%	1.4%	1.8%
Total GHG (energy, industry, agriculture)	21	13	17	27	37	60	98	-5.1%	2.8%	4.8%	3.5%	4.9%	5.0%
CO <sub>2</sub>	12	5	8	17	27	49	86	-8.8%	5.5%	7.5%	5.0%	6.2%	5.8%
CH <sub>4</sub>	5	4	5	5	5	6	6	-0.7%	0.6%	1.3%	0.4%	0.5%	0.4%
N <sub>2</sub> O	5	4	4	5	5	5	5	-3.0%	0.7%	1.8%	0.2%	0.5%	0.6%
F gases	0	0	0	0	0	0	1	n.s.	n.s.	5.2%	4.8%	5.7%	5.6%
Total GHG from Energy and Industry	14	7	10	19	30	52	90	-7.0%	4.7%	6.3%	4.5%	5.8%	5.6%
CO <sub>2</sub> Emissions from Fuel Comb.	12	4	7	15	24	44	79	-9.5%	5.1%	7.8%	4.9%	6.3%	6.0%
Power generation/District heating	1	1	2	3	4	7	11	6.3%	2.3%	5.7%	3.0%	4.6%	5.1%
Industry	1	1	3	5	7	12	17	6.7%	10.0%	7.6%	3.1%	4.7%	4.2%
Buildings	0	0	0	0	1	1	1	-5.2%	-2.2%	8.1%	4.8%	2.2%	1.3%
Agriculture	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Transport	1	2	2	3	3	4	6	2.1%	2.5%	3.3%	1.7%	2.8%	2.8%
Other	8	0	0	3	8	21	44	-45.9%	35.9%	22.9%	10.6%	9.3%	7.7%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	6	6	3	6	6	8	8	-1.2%	-7.3%	8.4%	0.7%	1.7%	1.2%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	4	4	0	0	1	1	2	-2.1%	-21.0%	3.7%	4.6%	3.8%	3.1%
Natural gas	0	0	0	0	0	0	0	6.2%	0.0%	-2.5%	-2.2%	-1.6%	-1.6%
Biomass	2	2	2	4	4	5	5	0.2%	-0.1%	9.7%	-0.7%	0.8%	0.5%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	0	0	0	0	0	0	0.6%	0.4%	n.s.	n.s.	n.s.	n.s.
Other renewables	0	0	0	1	1	2	2	n.s.	n.s.	10.7%	4.9%	3.4%	1.8%
Net Imports	-1	-2	2	2	5	11	21						
Coal	0	0	0	1	2	6	13						
Oil	-1	-2	2	3	2	2	3						
Natural gas	0	0	0	1	2	4	7						
Biomass	0	0	0	-3	-2	-2	-1						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	6	3	5	8	11	18	29	-5.0%	3.1%	5.3%	3.8%	5.0%	4.9%
Coal	0	0	0	1	2	6	13	n.s.	n.s.	n.s.	13.9%	10.1%	8.0%
Oil	4	1	2	3	3	4	4	-9.4%	3.1%	5.6%	-0.2%	1.1%	1.5%
Natural gas	0	0	1	1	2	5	7	6.1%	19.5%	7.4%	8.2%	6.4%	4.8%
Biomass	2	2	2	2	2	3	3	0.2%	-0.1%	1.0%	0.9%	1.9%	2.8%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	0	0	0	0	0	0	0.6%	0.4%	n.s.	n.s.	n.s.	n.s.
Other renewables	0	0	0	1	1	2	2	n.s.	n.s.	10.7%	4.9%	3.4%	1.8%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	6	3	5	8	11	18	29	-5.0%	3.1%	5.3%	3.8%	5.0%	4.9%
Energy for Power Generation	0	1	1	2	3	4	6	4.9%	5.5%	6.5%	3.9%	4.1%	3.7%
Other Energy Transformation & Losses	3	0	0	1	2	5	11	n.s.	n.s.	24.5%	10.8%	9.3%	7.8%
Final consumption	3	3	4	5	7	10	14	0.9%	2.3%	3.6%	2.5%	3.7%	3.6%
Steel, Non-Met. Minerals and Chem.	0	0	0	0	1	1	2	n.s.	n.s.	3.7%	4.1%	4.1%	3.5%
Other Industry	1	1	1	2	3	5	7	3.1%	2.2%	6.5%	3.2%	5.0%	4.6%
Non-Energy Use	0	0	0	0	0	0	1	n.s.	n.s.	6.1%	4.2%	4.9%	4.4%
Residential	1	1	1	2	2	2	2	-0.2%	0.1%	0.8%	0.5%	0.6%	0.6%
Services	0	0	0	0	0	0	1	2.8%	3.5%	3.9%	4.2%	5.0%	5.1%
Agriculture	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Road	0	1	1	1	1	1	1	2.2%	0.9%	2.8%	1.6%	2.4%	2.6%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Aviation	0	0	0	0	0	1	1	1.4%	2.8%	6.5%	4.6%	5.6%	4.6%
Other Transport	0	0	0	0	0	0	0	0.0%	0.0%	2.3%	3.2%	3.8%	3.9%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest Pacific	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>6.3%</b>	<b>2.6%</b>	<b>6.3%</b>	<b>3.3%</b>	<b>4.6%</b>	<b>4.8%</b>
Coal	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	15.7%	10.9%	8.4%
Oil	0	0	1	1	1	0	0	6.4%	2.6%	4.2%	-2.2%	-3.1%	-2.6%
Gas	0	0	0	0	1	1	2	6.2%	0.0%	10.5%	10.4%	7.1%	4.9%
Biomass & Waste	0	0	0	0	0	0	0	5.4%	-0.1%	12.4%	0.8%	7.0%	8.6%
Other	0	0	0	0	0	0	0	n.s.	n.s.	10.0%	4.2%	2.5%	0.4%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>10</b>	<b>16</b>	<b>27</b>	<b>3.3%</b>	<b>3.5%</b>	<b>3.1%</b>	<b>4.4%</b>	<b>5.3%</b>	<b>5.1%</b>
Coal	0	0	0	0	1	3	6	n.s.	n.s.	n.s.	15.8%	11.0%	8.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	2	2	3	3	2	2	6.0%	4.3%	3.9%	-2.3%	-3.1%	-2.5%
Gas	0	0	0	1	4	8	12	5.8%	2.8%	11.5%	10.5%	7.3%	5.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	1	1	1.7%	1.3%	13.1%	2.1%	9.6%	9.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	1	1	1	0	0	0	0	0.6%	0.4%	n.s.	n.s.	n.s.	n.s.
Wind	0	0	0	0	1	2	4	n.s.	n.s.	25.4%	11.2%	8.9%	7.5%
Solar	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	15.3%	9.7%	9.6%
Other	0	0	0	1	1	2	2	n.s.	n.s.	10.0%	4.2%	2.6%	0.9%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>0.7%</b>	<b>4.3%</b>	<b>5.1%</b>	<b>5.6%</b>	<b>5.6%</b>	<b>5.7%</b>
Coal	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	16.0%	11.0%	8.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	1	1	0	0	0	-0.3%	3.7%	-0.5%	-0.9%	-4.0%	-3.1%
Gas	0	0	0	0	1	2	3	7.4%	0.0%	15.4%	8.8%	7.0%	5.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	0	0	0	0	0	0	0	0.0%	9.4%	0.5%	2.2%	9.4%	9.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Wind	0	0	0	0	0	1	2	n.s.	n.s.	24.8%	11.1%	8.7%	7.3%
Solar	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	15.2%	9.5%	9.6%
Other	0	0	0	0	0	0	0	0.0%	28.4%	8.1%	3.5%	2.1%	0.7%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>7</b>	<b>10</b>	<b>14</b>	<b>0.9%</b>	<b>2.3%</b>	<b>3.6%</b>	<b>2.5%</b>	<b>3.7%</b>	<b>3.6%</b>
Coal	0	0	0	0	0	0	1	n.s.	n.s.	25.0%	11.6%	9.3%	7.4%
Oil	1	1	1	2	2	3	3	1.8%	2.3%	5.5%	0.4%	2.0%	2.0%
Gas	0	0	0	1	2	3	5	n.s.	n.s.	6.7%	7.4%	6.1%	4.7%
Electricity	0	0	0	1	1	1	2	3.8%	3.1%	3.1%	4.5%	5.4%	5.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	11.5%	7.5%	3.6%
Biomass & Other	2	2	2	2	2	2	3	0.2%	-0.1%	0.7%	0.4%	1.2%	1.9%
Share of Renewables <sup>3</sup> (%)	65%	60%	49%	37%	34%	30%	28%	-0.7%	-2.0%	-2.7%	-1.1%	-1.3%	-0.6%
<b>Industry (incl. non-energy use)</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>9</b>	<b>3.1%</b>	<b>5.9%</b>	<b>3.5%</b>	<b>4.8%</b>	<b>4.4%</b>	<b>4.4%</b>
Coal	0	0	0	0	0	0	1	n.s.	n.s.	24.0%	12.3%	9.5%	7.5%
Oil	0	0	1	1	1	1	1	8.0%	4.8%	8.1%	-0.6%	1.4%	1.4%
Gas	0	0	0	1	2	3	5	n.s.	n.s.	6.1%	7.0%	6.2%	4.8%
Electricity	0	0	0	0	0	1	1	3.7%	2.4%	3.1%	4.1%	5.5%	5.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	1	0.6%	-0.8%	2.4%	2.4%	3.9%	4.2%
<b>Buildings</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>0.0%</b>	<b>0.3%</b>	<b>1.1%</b>	<b>0.9%</b>	<b>1.3%</b>	<b>1.6%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-2.3%	-2.6%	-2.9%
Oil	0	0	0	0	0	0	0	-5.2%	-2.1%	4.6%	1.6%	0.6%	0.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	11.7%	4.0%	2.4%
Electricity	0	0	0	0	0	0	1	4.0%	4.4%	3.0%	4.0%	4.9%	5.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	11.5%	7.5%	3.6%
Biomass & Other	1	1	1	1	1	1	1	0.1%	0.1%	0.2%	-0.6%	-0.5%	-0.3%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2.1%</b>	<b>1.1%</b>	<b>3.4%</b>	<b>2.3%</b>	<b>3.3%</b>	<b>3.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	1	1	1	1	1	2	2.1%	1.1%	3.2%	1.4%	2.6%	2.7%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	21.9%	7.5%	5.4%
Electricity	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	31.6%	8.0%	5.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	16.0%	8.0%	6.7%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>11</b>	<b>n.s.</b>	<b>n.s.</b>	<b>24.5%</b>	<b>10.8%</b>	<b>9.3%</b>	<b>7.8%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

GECO2016 INDC	SUMMARY GHG & ENERGY BALANCE
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World	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	5 308	6 126	6 930	7 762	8 509	9 174	9 750	1.4%	1.2%	1.1%	0.9%	0.8%	0.6%
GDP per capita (ppp, k\$'05)	7	8	10	12	15	20	24	1.5%	2.2%	2.1%	2.6%	2.3%	1.9%
GDP per capita (mer, k\$'05)	6	7	8	9	10	12	14	1.3%	1.3%	1.4%	1.8%	1.8%	1.6%
Share Value Added - Agriculture (%)	8	5	5	5	5	6	6	-3.5%	0.1%	0.0%	0.1%	0.1%	0.1%
Share Value Added - Industry (%)	33	30	30	31	30	27	25	-1.0%	0.1%	0.1%	-0.4%	-0.8%	-0.9%
Share Value Added - Services (%)	59	65	64	64	65	67	69	0.9%	-0.1%	0.0%	0.2%	0.3%	0.3%
<b>Prices</b>													
<b>International (\$'05/boe)</b>													
Coal	16	8	19	15	17	20	21	-6.8%	8.9%	-2.1%	1.5%	1.2%	0.8%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	19	23	32	35	46	63	85	2.3%	3.2%	0.9%	2.8%	3.2%	2.9%
<b>GHG emissions (MtCO<sub>2</sub> eq.)</b>													
Total GHG	33 853	36 187	45 396	51 956	53 133	52 194	46 243	0.7%	2.3%	1.4%	0.2%	-0.2%	-1.2%
Total GHG (excl. sinks)	36 248	39 232	48 277	54 347	55 550	54 975	50 916	0.8%	2.1%	1.2%	0.2%	-0.1%	-0.8%
Total GHG (energy, industry, agriculture)	31 878	34 490	44 357	50 763	52 715	52 128	48 317	0.8%	2.5%	1.4%	0.4%	-0.1%	-0.8%
CO <sub>2</sub>	22 847	25 496	33 742	39 694	42 143	41 933	38 672	1.1%	2.8%	1.6%	0.6%	0.0%	-0.8%
CH <sub>4</sub>	5 981	6 044	7 182	7 351	6 960	6 571	6 136	0.1%	1.7%	0.2%	-0.5%	-0.6%	-0.7%
N <sub>2</sub> O	2 747	2 564	2 867	3 067	3 121	3 144	3 024	-0.7%	1.1%	0.7%	0.2%	0.1%	-0.4%
F gases	304	386	566	652	490	480	486	2.4%	3.9%	1.4%	-2.8%	-0.2%	0.1%
Total GHG from Energy and Industry	26 933	29 688	39 011	45 093	47 065	46 469	43 008	1.0%	2.8%	1.5%	0.4%	-0.1%	-0.8%
CO <sub>2</sub> Emissions from Fuel Comb.	21 415	23 790	31 110	36 089	37 774	37 091	33 798	1.1%	2.7%	1.5%	0.5%	-0.2%	-0.9%
Power generation/District heating	6 848	8 416	11 647	12 904	13 561	12 542	10 179	2.1%	3.3%	1.0%	0.5%	-0.8%	-2.1%
Industry	4 272	4 299	6 345	7 692	8 105	7 779	7 000	0.1%	4.0%	1.9%	0.5%	-0.4%	-1.0%
Buildings	2 975	2 752	2 969	3 003	2 980	2 941	2 711	-0.8%	0.8%	0.1%	-0.1%	-0.1%	-0.8%
Agriculture	427	362	425	467	465	429	362	-1.6%	1.6%	0.9%	0.0%	-0.8%	-1.7%
Transport	4 662	5 756	6 942	8 489	8 871	9 545	9 896	2.1%	1.9%	2.0%	0.4%	0.7%	0.4%
Other	2 230	2 205	2 781	3 534	3 792	3 855	3 651	-0.1%	2.3%	2.4%	0.7%	0.2%	-0.5%
CO <sub>2</sub> captured (CCS)	0	0	0	1	232	1 911	5 072	n.s.	n.s.	n.s.	n.s.	23.5%	10.3%
Coal	0	0	0	1	164	1 591	4 051	n.s.	n.s.	n.s.	n.s.	25.5%	9.8%
Gas	0	0	0	0	66	309	790	n.s.	n.s.	n.s.	n.s.	16.7%	9.8%
Biomass	0	0	0	0	2	10	231	n.s.	n.s.	n.s.	21.0%	19.9%	36.4%
<b>Energy Balance, by fuel (Mtoe)</b>													
<b>Primary Production</b>													
Coal	8 907	10 162	13 072	15 451	17 530	19 240	20 135	1.3%	2.6%	1.7%	1.3%	0.9%	0.5%
Oil	2 310	2 454	3 767	4 367	4 376	4 172	3 910	0.6%	4.4%	1.5%	0.0%	-0.5%	-0.6%
Natural gas	3 286	3 709	4 191	4 853	4 964	5 097	5 025	1.2%	1.2%	1.5%	0.2%	0.3%	-0.1%
Biomass	1 690	2 072	2 740	3 267	4 069	4 718	5 090	2.1%	2.8%	1.8%	2.2%	1.5%	0.8%
Biomass	866	957	1 233	1 415	1 784	2 067	2 348	1.0%	2.6%	1.4%	2.3%	1.5%	1.3%
Nuclear <sup>1</sup>	533	686	728	774	1 151	1 559	1 668	2.6%	0.6%	0.6%	4.1%	3.1%	0.7%
Hydro	188	232	303	378	437	458	474	2.1%	2.7%	2.2%	1.5%	0.5%	0.3%
Other renewables	34	52	110	398	750	1 170	1 620	4.5%	7.7%	13.8%	6.5%	4.6%	3.3%
<b>International Bunkers</b>													
Maritime Bunkers	236	319	418	556	685	829	962	3.0%	2.7%	2.9%	2.1%	1.9%	1.5%
Aviation Bunkers	151	202	266	362	447	535	612	2.9%	2.8%	3.1%	2.1%	1.8%	1.3%
Oil	85	117	152	194	238	294	350	3.2%	2.7%	2.5%	2.0%	2.1%	1.8%
Biofuels	85	117	152	193	233	285	335	3.2%	2.7%	2.5%	1.9%	2.0%	1.6%
Other renewables	0	0	0	1	5	9	15	n.s.	n.s.	n.s.	16.9%	6.7%	5.3%
<b>Regional Energy Demand (excl. bunkers)</b>													
Coal	8 670	9 843	12 654	14 895	16 844	18 411	19 173	1.3%	2.5%	1.6%	1.2%	0.9%	0.4%
Oil	2 310	2 454	3 767	4 367	4 376	4 172	3 910	0.6%	4.4%	1.5%	0.0%	-0.5%	-0.6%
Natural gas	3 050	3 390	3 773	4 298	4 283	4 277	4 078	1.1%	1.1%	1.3%	0.0%	0.0%	-0.5%
Biomass	1 690	2 072	2 740	3 267	4 069	4 718	5 090	2.1%	2.8%	1.8%	2.2%	1.5%	0.8%
Biomass	866	957	1 233	1 414	1 779	2 058	2 332	1.0%	2.6%	1.4%	2.3%	1.5%	1.3%
Nuclear <sup>1</sup>	533	686	728	774	1 151	1 559	1 668	2.6%	0.6%	0.6%	4.1%	3.1%	0.7%
Hydro	188	232	303	378	437	458	474	2.1%	2.7%	2.2%	1.5%	0.5%	0.3%
Other renewables	34	52	110	398	750	1 170	1 620	4.5%	7.7%	13.8%	6.5%	4.6%	3.3%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
<b>Primary Energy Demand</b>													
Energy for Power Generation	8 907	10 162	13 072	15 451	17 530	19 240	20 135	1.3%	2.6%	1.7%	1.3%	0.9%	0.5%
Other Energy Transformation & Losses	2 794	3 462	4 659	5 493	6 738	7 941	8 896	2.2%	3.0%	1.7%	2.1%	1.7%	1.1%
Final consumption (incl. bunkers)	883	875	1 220	1 506	1 797	1 985	2 148	-0.1%	3.4%	2.1%	1.8%	1.0%	0.8%
Steel, Non-Met. Minerals and Chem.	6 406	7 177	9 075	10 844	12 095	13 150	13 631	1.1%	2.4%	1.8%	1.1%	0.8%	0.4%
Other Industry	834	930	1 400	1 784	1 956	1 904	1 730	1.1%	4.2%	2.5%	0.9%	-0.3%	-1.0%
Non-Energy Use	1 118	1 076	1 351	1 728	2 080	2 344	2 461	-0.4%	2.3%	2.5%	1.9%	1.2%	0.5%
Residential	492	636	828	956	1 035	1 089	1 075	2.6%	2.7%	1.5%	0.8%	0.5%	-0.1%
Services	1 635	1 794	2 047	2 178	2 253	2 320	2 289	0.9%	1.3%	0.6%	0.3%	0.3%	-0.1%
Agriculture	595	635	830	981	1 194	1 464	1 703	0.6%	2.7%	1.7%	2.0%	2.1%	1.5%
Road	169	147	179	209	237	263	287	-1.3%	2.0%	1.6%	1.2%	1.1%	0.9%
Rail	1 132	1 441	1 824	2 192	2 339	2 569	2 724	2.4%	2.4%	1.9%	0.7%	0.9%	0.6%
Aviation	60	48	52	62	70	79	86	-2.3%	0.8%	1.7%	1.3%	1.2%	0.9%
Other Transport	181	225	251	325	398	487	568	2.2%	1.1%	2.6%	2.1%	2.0%	1.5%
Other Transport	190	244	314	430	533	631	708	2.5%	2.6%	3.2%	2.2%	1.7%	1.2%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

World	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>2 043</b>	<b>2 496</b>	<b>3 524</b>	<b>3 956</b>	<b>4 421</b>	<b>4 777</b>	<b>5 159</b>	<b>2.0%</b>	<b>3.5%</b>	<b>1.2%</b>	<b>1.1%</b>	<b>0.8%</b>	<b>0.8%</b>
Coal	1 172	1 504	2 129	2 391	2 409	2 406	2 332	2.5%	3.5%	1.2%	0.1%	0.0%	-0.3%
Oil	335	290	246	223	250	251	285	-1.4%	-1.7%	-1.0%	1.1%	0.0%	1.3%
Gas	480	646	1 023	1 147	1 440	1 675	1 918	3.0%	4.7%	1.2%	2.3%	1.5%	1.4%
Biomass & Waste	53	52	120	182	301	422	598	-0.2%	8.7%	4.3%	5.1%	3.4%	3.5%
Other	3	4	6	13	20	23	26	3.6%	2.8%	8.4%	4.5%	1.4%	0.9%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>11 845</b>	<b>15 472</b>	<b>21 554</b>	<b>27 857</b>	<b>35 861</b>	<b>43 856</b>	<b>51 005</b>	<b>2.7%</b>	<b>3.4%</b>	<b>2.6%</b>	<b>2.6%</b>	<b>2.0%</b>	<b>1.5%</b>
Coal	4 423	5 999	8 661	10 473	10 943	11 091	10 925	3.1%	3.7%	1.9%	0.4%	0.1%	-0.2%
of which CCS	0	0	0	0	163	1 888	4 804	n.s.	n.s.	n.s.	n.s.	27.7%	9.8%
Oil	1 292	1 178	931	944	1 066	1 085	1 245	-0.9%	-2.3%	0.1%	1.2%	0.2%	1.4%
Gas	1 762	2 753	4 811	5 737	7 477	8 969	10 418	4.6%	5.7%	1.8%	2.7%	1.8%	1.5%
of which CCS	0	0	0	0	161	848	2 130	n.s.	n.s.	n.s.	n.s.	18.1%	9.7%
Biomass & Waste	123	169	380	617	1 144	1 753	2 696	3.2%	8.4%	5.0%	6.4%	4.4%	4.4%
of which CCS	0	0	0	0	0	2	236	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	2 013	2 591	2 756	2 956	4 503	6 213	6 719	2.6%	0.6%	0.7%	4.3%	3.3%	0.8%
Hydro	2 191	2 697	3 529	4 390	5 080	5 322	5 511	2.1%	2.7%	2.2%	1.5%	0.5%	0.3%
Wind	4	31	368	1 944	3 914	6 301	8 427	23.2%	27.9%	18.1%	7.2%	4.9%	2.9%
Solar	1	1	49	621	1 427	2 705	4 480	7.5%	41.8%	29.0%	8.7%	6.6%	5.2%
Other	36	52	68	174	306	416	582	3.6%	2.8%	9.8%	5.8%	3.1%	3.4%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>2 962</b>	<b>3 588</b>	<b>5 162</b>	<b>7 322</b>	<b>9 707</b>	<b>12 205</b>	<b>13 795</b>	<b>1.9%</b>	<b>3.7%</b>	<b>3.6%</b>	<b>2.9%</b>	<b>2.3%</b>	<b>1.2%</b>
Coal	894	1 142	1 702	2 113	2 368	2 482	1 831	2.5%	4.1%	2.2%	1.1%	0.5%	-3.0%
of which CCS	0	0	0	0	24	271	692	n.s.	n.s.	n.s.	n.s.	27.7%	9.8%
Oil	630	496	413	423	415	417	441	-2.4%	-1.8%	0.2%	-0.2%	0.1%	0.5%
Gas	548	742	1 313	1 608	1 880	2 073	2 100	3.1%	5.9%	2.0%	1.6%	1.0%	0.1%
of which CCS	0	0	0	0	21	119	293	n.s.	n.s.	n.s.	n.s.	18.7%	9.4%
Biomass & Waste	27	45	99	149	231	324	446	5.1%	8.2%	4.2%	4.5%	3.4%	3.2%
of which CCS	0	0	0	0	0	0	32	n.s.	n.s.	n.s.	n.s.	n.s.	55.2%
Nuclear	290	355	377	404	604	824	882	2.1%	0.6%	0.7%	4.1%	3.2%	0.7%
Hydro	564	782	1 020	1 274	1 448	1 513	1 567	3.3%	2.7%	2.2%	1.3%	0.4%	0.4%
Wind	2	17	184	853	1 683	2 646	3 463	23.8%	27.0%	16.6%	7.0%	4.6%	2.7%
Solar	1	2	43	468	1 021	1 847	2 958	6.7%	39.1%	27.0%	8.1%	6.1%	4.8%
Other	6	8	10	29	57	78	108	3.6%	2.2%	11.2%	6.9%	3.2%	3.3%
<b>Total Final Consumption (Mtoe)</b>	<b>6 406</b>	<b>7 177</b>	<b>9 075</b>	<b>10 844</b>	<b>12 095</b>	<b>13 150</b>	<b>13 631</b>	<b>1.1%</b>	<b>2.4%</b>	<b>1.8%</b>	<b>1.1%</b>	<b>0.8%</b>	<b>0.4%</b>
Coal	899	704	1 244	1 432	1 408	1 245	1 081	-2.4%	5.8%	1.4%	-0.2%	-1.2%	-1.4%
Oil	2 635	3 163	3 668	4 339	4 429	4 571	4 494	1.8%	1.5%	1.7%	0.2%	0.3%	-0.2%
Gas	897	1 074	1 277	1 579	1 965	2 273	2 327	1.8%	1.8%	2.1%	2.2%	1.5%	0.2%
Electricity	831	1 086	1 531	1 987	2 556	3 129	3 654	2.7%	3.5%	2.6%	2.6%	2.0%	1.6%
Heat	339	256	293	327	384	469	558	-2.8%	1.4%	1.1%	1.6%	2.0%	1.7%
Biomass & Other	807	895	1 062	1 181	1 353	1 463	1 517	1.0%	1.7%	1.1%	1.4%	0.8%	0.4%
Share of Renewables <sup>2</sup> (%)	17%	18%	18%	19%	22%	25%	28%	0.3%	0.0%	0.7%	1.4%	1.2%	1.3%
<b>Industry (incl. non-energy use)</b>	<b>2 443</b>	<b>2 643</b>	<b>3 578</b>	<b>4 468</b>	<b>5 071</b>	<b>5 337</b>	<b>5 267</b>	<b>0.8%</b>	<b>3.1%</b>	<b>2.2%</b>	<b>1.3%</b>	<b>0.5%</b>	<b>-0.1%</b>
Coal	629	584	1 089	1 296	1 310	1 184	1 049	-0.7%	6.4%	1.8%	0.1%	-1.0%	-1.2%
Oil	685	798	918	1 042	1 034	996	889	1.5%	1.4%	1.3%	-0.1%	-0.4%	-1.1%
Gas	454	533	623	881	1 154	1 353	1 366	1.6%	1.6%	3.5%	2.7%	1.6%	0.1%
Electricity	381	460	637	896	1 145	1 314	1 444	1.9%	3.3%	3.5%	2.5%	1.4%	1.0%
Heat	163	105	125	135	146	154	158	-4.3%	1.8%	0.8%	0.8%	0.6%	0.3%
Biomass & Other	133	163	185	217	282	337	361	2.0%	1.3%	1.6%	2.6%	1.8%	0.7%
<b>Buildings</b>	<b>2 230</b>	<b>2 429</b>	<b>2 877</b>	<b>3 159</b>	<b>3 447</b>	<b>3 784</b>	<b>3 992</b>	<b>0.9%</b>	<b>1.7%</b>	<b>0.9%</b>	<b>0.9%</b>	<b>0.9%</b>	<b>0.5%</b>
Coal	242	108	139	120	86	52	27	-7.8%	2.5%	-1.4%	-3.3%	-4.9%	-6.3%
Oil	316	341	307	320	313	300	272	0.8%	-1.0%	0.4%	-0.2%	-0.4%	-1.0%
Gas	434	532	619	647	705	763	746	2.1%	1.5%	0.4%	0.9%	0.8%	-0.2%
Electricity	403	581	834	1 003	1 215	1 503	1 780	3.7%	3.7%	1.9%	1.9%	2.2%	1.7%
Heat	176	151	168	192	238	315	400	-1.6%	1.1%	1.4%	2.2%	2.8%	2.4%
Biomass & Other	660	716	812	877	891	851	767	0.8%	1.3%	0.8%	0.2%	-0.5%	-1.0%
<b>Agriculture</b>	<b>169</b>	<b>147</b>	<b>179</b>	<b>209</b>	<b>237</b>	<b>263</b>	<b>287</b>	<b>-1.3%</b>	<b>2.0%</b>	<b>1.6%</b>	<b>1.2%</b>	<b>1.1%</b>	<b>0.9%</b>
Coal	15	8	13	13	10	6	3	-6.8%	5.6%	-0.2%	-2.4%	-4.5%	-6.3%
Oil	110	101	112	125	128	122	105	-0.9%	1.1%	1.1%	0.2%	-0.5%	-1.5%
Gas	7	6	7	8	8	8	7	-2.5%	2.9%	1.1%	0.0%	-0.7%	-1.6%
Electricity	30	29	39	54	70	89	112	-0.5%	3.2%	3.2%	2.7%	2.5%	2.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	6	5	7	9	20	38	61	-1.7%	3.9%	2.4%	8.5%	6.6%	4.8%
<b>Transport (incl. bunkers)</b>	<b>1 564</b>	<b>1 958</b>	<b>2 441</b>	<b>3 008</b>	<b>3 341</b>	<b>3 766</b>	<b>4 086</b>	<b>2.3%</b>	<b>2.2%</b>	<b>2.1%</b>	<b>1.1%</b>	<b>1.2%</b>	<b>0.8%</b>
Coal	13	5	3	3	2	2	1	-9.8%	-3.4%	-2.4%	-1.9%	-1.9%	-1.9%
Oil	1 524	1 923	2 331	2 852	2 954	3 153	3 228	2.4%	1.9%	2.0%	0.4%	0.7%	0.2%
Gas	2	3	28	42	98	150	210	5.2%	24.4%	4.2%	8.7%	4.4%	3.4%
Electricity	17	16	21	34	126	223	318	-0.7%	2.5%	5.1%	14.1%	5.9%	3.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	8	11	58	78	161	237	328	3.7%	18.1%	3.0%	7.6%	4.0%	3.3%
<b>Other Energy Transformation &amp; Losses<sup>3</sup></b>	<b>883</b>	<b>875</b>	<b>1 220</b>	<b>1 506</b>	<b>1 797</b>	<b>1 985</b>	<b>2 148</b>	<b>-0.1%</b>	<b>3.4%</b>	<b>2.1%</b>	<b>1.8%</b>	<b>1.0%</b>	<b>0.8%</b>

<sup>2</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>3</sup> includes statistical differences

GECO2016 INDC	SUMMARY GHG & ENERGY BALANCE
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EU28	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	476	487	503	513	519	524	525	0.2%	0.3%	0.2%	0.1%	0.1%	0.0%
GDP per capita (ppp, k\$'05)	20	25	28	30	34	39	45	1.9%	1.2%	0.8%	1.3%	1.4%	1.4%
GDP per capita (mer, k\$'05)	22	27	30	32	36	42	48	2.0%	1.1%	0.7%	1.2%	1.4%	1.5%
Share Value Added - Agriculture (%)	3	2	2	2	2	1	1	-5.0%	-1.2%	-0.7%	-0.4%	-0.5%	-0.5%
Share Value Added - Industry <sup>1</sup> (%)	34	28	25	25	24	23	21	-1.8%	-1.1%	-0.2%	-0.3%	-0.5%	-0.6%
Share Value Added - Services (%)	63	70	73	74	75	76	77	1.1%	0.5%	0.1%	0.1%	0.2%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	13	15	18	-6.5%	7.4%	-4.3%	0.9%	1.5%	1.4%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	18	21	30	38	51	65	84	1.4%	3.8%	2.3%	3.0%	2.6%	2.5%
<b>GHG emissions (MtCO<sub>2</sub> eq.)</b>													
Total GHG	5 329	4 835	4 448	3 738	2 984	2 626	2 219	-1.0%	-0.8%	-1.7%	-2.2%	-1.3%	-1.7%
Total GHG (excl. sinks)	5 628	5 166	4 783	4 001	3 257	2 875	2 454	-0.9%	-0.8%	-1.8%	-2.0%	-1.2%	-1.6%
Total GHG (energy, industry, agriculture)	5 598	5 150	4 770	3 987	3 241	2 782	2 353	-0.8%	-0.8%	-1.8%	-2.0%	-1.5%	-1.7%
CO <sub>2</sub>	4 385	4 135	3 899	3 273	2 685	2 274	1 885	-0.6%	-0.6%	-1.7%	-2.0%	-1.7%	-1.9%
CH <sub>4</sub>	601	495	409	332	262	236	204	-1.9%	-1.9%	-2.0%	-2.3%	-1.0%	-1.5%
N <sub>2</sub> O	557	455	373	312	273	249	239	-2.0%	-2.0%	-1.8%	-1.3%	-0.9%	-0.4%
F gases	56	65	90	70	20	23	25	1.5%	3.3%	-2.5%	-11.5%	1.3%	0.8%
Total GHG from Energy and Industry	4 982	4 629	4 295	3 543	2 829	2 403	1 987	-0.7%	-0.7%	-1.9%	-2.2%	-1.6%	-1.9%
CO <sub>2</sub> Emissions from Fuel Comb.	4 139	3 897	3 691	3 078	2 517	2 112	1 735	-0.6%	-0.5%	-1.8%	-2.0%	-1.7%	-1.9%
Power generation/District heating	1 424	1 283	1 235	948	679	527	400	-1.0%	-0.4%	-2.6%	-3.3%	-2.5%	-2.7%
Industry	843	710	554	506	421	378	341	-1.7%	-2.5%	-0.9%	-1.8%	-1.1%	-1.0%
Buildings	724	652	660	489	475	429	366	-1.1%	0.1%	-2.9%	-0.3%	-1.0%	-1.6%
Agriculture	84	72	59	57	57	48	33	-1.5%	-2.0%	-0.4%	0.0%	-1.7%	-3.6%
Transport	764	900	925	846	685	549	445	1.7%	0.3%	-0.9%	-2.1%	-2.2%	-2.1%
Other	300	280	259	232	201	182	150	-0.7%	-0.8%	-1.1%	-1.5%	-1.0%	-1.9%
CO <sub>2</sub> captured (CCS)	0	0	0	1	57	272	640	n.s.	n.s.	n.s.	n.s.	16.9%	8.9%
Coal	0	0	0	0	42	205	501	n.s.	n.s.	n.s.	58.4%	17.1%	9.3%
Gas	0	0	0	0	14	63	104	n.s.	n.s.	n.s.	n.s.	16.4%	5.1%
Biomass	0	0	0	0	1	4	35	n.s.	n.s.	n.s.	27.7%	15.9%	24.8%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	933	965	855	781	783	840	844	0.3%	-1.2%	-0.9%	0.0%	0.7%	0.0%
Coal	357	241	177	131	84	79	82	-3.9%	-3.1%	-2.9%	-4.4%	-0.6%	0.4%
Oil	136	178	101	68	52	38	29	2.7%	-5.5%	-3.9%	-2.5%	-3.1%	-2.8%
Natural gas	156	194	148	113	96	91	100	2.2%	-2.7%	-2.6%	-1.7%	-0.4%	0.9%
Biomass	44	63	130	170	207	230	233	3.7%	7.5%	2.7%	2.0%	1.1%	0.1%
Nuclear <sup>1</sup>	210	250	242	202	214	251	213	1.7%	-0.3%	-1.8%	0.6%	1.6%	-1.6%
Hydro	27	33	35	34	35	34	34	2.3%	0.5%	-0.2%	0.1%	-0.2%	0.0%
Other renewables	3	6	22	63	95	117	153	8.0%	13.0%	11.1%	4.2%	2.1%	2.7%
Net Imports	747	761	899	793	727	697	681						
Coal	125	108	123	130	74	71	122						
Oil	479	448	471	418	355	306	245						
Natural gas	139	202	300	227	281	290	274						
Biomass	0	0	2	15	11	20	30						
Biofuels	0	0	2	2	5	8	9						
Electricity	4	2	1	1	1	1	1						
Primary Energy Demand <sup>2</sup>	1 680	1 726	1 754	1 574	1 510	1 537	1 525	0.3%	0.2%	-1.1%	-0.4%	0.2%	-0.1%
Coal	482	349	299	261	158	150	204	-3.2%	-1.5%	-1.4%	-4.9%	-0.5%	3.1%
Oil	615	626	572	486	408	344	274	0.2%	-0.9%	-1.6%	-1.7%	-1.7%	-2.3%
Natural gas	295	396	447	340	377	382	374	3.0%	1.2%	-2.7%	1.0%	0.1%	-0.2%
Biomass	44	63	133	185	218	251	263	3.7%	7.7%	3.4%	1.7%	1.4%	0.5%
Nuclear <sup>1</sup>	210	250	242	202	214	251	213	1.7%	-0.3%	-1.8%	0.6%	1.6%	-1.6%
Hydro	27	33	35	34	35	34	34	2.3%	0.5%	-0.2%	0.1%	-0.2%	0.0%
Other renewables	3	6	22	63	95	117	153	8.0%	13.0%	11.1%	4.2%	2.1%	2.7%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	1 680	1 726	1 754	1 574	1 510	1 537	1 525	0.3%	0.2%	-1.1%	-0.4%	0.2%	-0.1%
Energy for Power Generation	635	674	722	645	675	774	837	0.6%	0.7%	-1.1%	0.5%	1.4%	0.8%
Other Energy Transformation & Losses	134	119	128	124	122	122	118	-1.2%	0.7%	-0.3%	-0.1%	0.0%	-0.3%
Final consumption	1 152	1 197	1 217	1 116	1 065	1 046	1 026	0.4%	0.2%	-0.9%	-0.5%	-0.2%	-0.2%
Steel, Non-Met. Minerals and Chem.	190	165	139	132	110	99	92	-1.4%	-1.7%	-0.5%	-1.8%	-1.1%	-0.7%
Other Industry	175	163	145	142	142	149	156	-0.8%	-1.1%	-0.2%	0.0%	0.5%	0.5%
Non-Energy Use	100	113	108	100	90	88	85	1.2%	-0.4%	-0.8%	-1.0%	-0.3%	-0.3%
Residential	276	289	312	262	260	256	244	0.5%	0.8%	-1.7%	-0.1%	-0.2%	-0.5%
Services	118	133	166	150	160	173	184	1.3%	2.2%	-1.0%	0.6%	0.8%	0.6%
Agriculture	33	29	26	25	26	28	29	-1.4%	-1.1%	-0.3%	0.5%	0.5%	0.5%
Road	237	281	299	285	256	232	213	1.7%	0.6%	-0.5%	-1.1%	-1.0%	-0.9%
Rail	10	10	8	8	8	9	9	0.1%	-1.7%	-0.4%	0.5%	0.6%	0.6%
Aviation	6	7	7	7	7	8	9	2.4%	-0.4%	-0.8%	1.0%	1.2%	1.1%
Other Transport	7	6	6	5	5	5	4	-0.9%	-0.8%	-1.9%	0.1%	-0.3%	-0.7%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%



EU28	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>395</b>	<b>385</b>	<b>423</b>	<b>347</b>	<b>333</b>	<b>375</b>	<b>439</b>	<b>-0.3%</b>	<b>0.9%</b>	<b>-1.9%</b>	<b>-0.4%</b>	<b>1.2%</b>	<b>1.6%</b>
Coal	284	234	209	178	98	96	149	-1.9%	-1.1%	-1.6%	-5.8%	-0.1%	4.4%
Oil	55	41	23	10	12	20	16	-2.9%	-5.5%	-8.3%	2.1%	5.2%	-2.0%
Gas	50	94	141	89	126	138	142	6.6%	4.1%	-4.5%	3.5%	0.9%	0.3%
Biomass & Waste	6	15	49	69	95	119	130	9.8%	12.9%	3.5%	3.3%	2.2%	0.9%
Other	0	0	0	1	2	2	2	4.0%	1.6%	8.9%	3.2%	1.7%	0.5%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>2 594</b>	<b>3 031</b>	<b>3 366</b>	<b>3 253</b>	<b>3 586</b>	<b>4 061</b>	<b>4 631</b>	<b>1.6%</b>	<b>1.1%</b>	<b>-0.3%</b>	<b>1.0%</b>	<b>1.3%</b>	<b>1.3%</b>
Coal	1 050	966	862	760	445	456	717	-0.8%	-1.1%	-1.3%	-5.2%	0.2%	4.6%
of which CCS	0	0	0	0	38	228	584	n.s.	n.s.	n.s.	n.s.	19.6%	9.8%
Oil	224	181	87	42	52	86	71	-2.1%	-7.1%	-7.0%	2.1%	5.3%	-1.9%
Gas	193	480	763	479	678	723	812	9.5%	4.8%	-4.5%	3.5%	0.7%	1.2%
of which CCS	0	0	0	0	35	176	288	n.s.	n.s.	n.s.	n.s.	17.4%	5.1%
Biomass & Waste	20	46	143	233	341	436	498	8.9%	12.0%	5.0%	3.9%	2.5%	1.3%
of which CCS	0	0	0	0	0	2	26	n.s.	n.s.	n.s.	n.s.	n.s.	30.9%
Nuclear	795	945	917	765	821	976	845	1.7%	-0.3%	-1.8%	0.7%	1.7%	-1.4%
Hydro	309	386	407	397	403	393	395	2.3%	0.5%	-0.2%	0.1%	-0.2%	0.0%
Wind	1	22	149	397	540	642	863	39.8%	21.0%	9.8%	3.6%	1.7%	3.0%
Solar	0	0	33	164	225	217	244	27.8%	n.s.	17.5%	3.2%	-0.4%	1.2%
Other	3	5	6	34	81	130	185	4.0%	1.6%	19.6%	9.2%	4.9%	3.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>634</b>	<b>720</b>	<b>923</b>	<b>1 128</b>	<b>1 284</b>	<b>1 204</b>	<b>1 366</b>	<b>1.3%</b>	<b>2.5%</b>	<b>2.0%</b>	<b>1.3%</b>	<b>-0.6%</b>	<b>1.3%</b>
Coal	224	202	193	181	132	84	112	-1.0%	-0.4%	-0.6%	-3.1%	-4.4%	2.9%
of which CCS	0	0	0	0	6	33	87	n.s.	n.s.	n.s.	n.s.	18.7%	10.1%
Oil	95	81	66	37	32	29	32	-1.5%	-2.1%	-5.6%	-1.5%	-1.0%	1.0%
Gas	65	129	220	254	280	185	209	7.1%	5.4%	1.4%	1.0%	-4.1%	1.2%
of which CCS	0	0	0	0	5	24	43	n.s.	n.s.	n.s.	n.s.	16.9%	6.0%
Biomass & Waste	10	17	47	60	81	92	92	5.3%	10.8%	2.4%	3.0%	1.3%	0.1%
of which CCS	0	0	0	0	0	0	4	n.s.	n.s.	n.s.	n.s.	n.s.	29.1%
Nuclear	123	138	131	110	116	132	112	1.1%	-0.5%	-1.8%	0.5%	1.4%	-1.7%
Hydro	116	140	148	151	154	151	151	1.9%	0.5%	0.2%	0.2%	-0.2%	0.0%
Wind	0	12	85	175	259	296	384	40.0%	21.4%	7.5%	4.0%	1.3%	2.7%
Solar	0	0	31	152	207	198	223	35.9%	n.s.	17.1%	3.2%	-0.5%	1.2%
Other	0	1	1	9	24	37	51	2.0%	2.3%	27.4%	10.8%	4.6%	3.1%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>1 152</b>	<b>1 197</b>	<b>1 217</b>	<b>1 116</b>	<b>1 065</b>	<b>1 046</b>	<b>1 026</b>	<b>0.4%</b>	<b>0.2%</b>	<b>-0.9%</b>	<b>-0.5%</b>	<b>-0.2%</b>	<b>-0.2%</b>
Coal	141	73	57	55	40	33	33	-6.3%	-2.5%	-0.4%	-3.1%	-1.8%	-0.1%
Oil	503	540	505	442	368	302	242	0.7%	-0.7%	-1.3%	-1.8%	-2.0%	-2.2%
Gas	229	273	279	226	222	215	204	1.8%	0.2%	-2.1%	-0.2%	-0.3%	-0.5%
Electricity	186	218	244	238	263	301	341	1.6%	1.2%	-0.3%	1.0%	1.4%	1.3%
Heat	55	45	55	51	61	70	79	-1.9%	1.9%	-0.6%	1.7%	1.5%	1.1%
Biomass & Other	38	48	78	104	111	124	128	2.3%	4.9%	2.9%	0.7%	1.1%	0.3%
Share of Renewables <sup>3</sup> (%)	6%	8%	13%	20%	27%	33%	39%	2.5%	4.8%	5.0%	3.0%	2.0%	1.6%
<b>Industry (incl. non-energy use)</b>	<b>466</b>	<b>441</b>	<b>393</b>	<b>374</b>	<b>342</b>	<b>336</b>	<b>333</b>	<b>-0.6%</b>	<b>-1.1%</b>	<b>-0.5%</b>	<b>-0.9%</b>	<b>-0.2%</b>	<b>-0.1%</b>
Coal	93	60	44	46	34	31	33	-4.2%	-3.1%	0.5%	-2.9%	-0.9%	0.4%
Oil	139	144	127	105	88	77	68	0.3%	-1.3%	-1.8%	-1.8%	-1.3%	-1.3%
Gas	114	118	97	91	83	79	74	0.4%	-1.9%	-0.6%	-0.9%	-0.5%	-0.6%
Electricity	85	91	89	90	97	106	117	0.7%	-0.3%	0.2%	0.7%	0.9%	0.9%
Heat	21	11	15	14	14	13	13	-6.5%	3.6%	-0.7%	-0.2%	-0.3%	-0.2%
Biomass & Other	14	17	22	28	26	29	29	1.9%	2.6%	2.5%	-0.5%	0.8%	0.0%
<b>Buildings</b>	<b>394</b>	<b>423</b>	<b>478</b>	<b>412</b>	<b>420</b>	<b>428</b>	<b>428</b>	<b>0.7%</b>	<b>1.2%</b>	<b>-1.5%</b>	<b>0.2%</b>	<b>0.2%</b>	<b>0.0%</b>
Coal	46	12	12	8	5	2	0	-12.8%	0.0%	-4.2%	-4.6%	-10.1%	-16.0%
Oil	89	80	63	50	54	52	44	-1.1%	-2.4%	-2.2%	0.7%	-0.4%	-1.5%
Gas	110	150	177	128	122	110	96	3.2%	1.6%	-3.2%	-0.5%	-1.0%	-1.4%
Electricity	90	116	146	137	139	151	168	2.5%	2.3%	-0.7%	0.2%	0.9%	1.1%
Heat	34	35	40	37	47	57	66	0.2%	1.3%	-0.6%	2.3%	1.9%	1.4%
Biomass & Other	24	30	41	52	54	56	53	2.3%	3.2%	2.6%	0.3%	0.5%	-0.5%
<b>Agriculture</b>	<b>33</b>	<b>29</b>	<b>26</b>	<b>25</b>	<b>26</b>	<b>28</b>	<b>29</b>	<b>-1.4%</b>	<b>-1.1%</b>	<b>-0.3%</b>	<b>0.5%</b>	<b>0.5%</b>	<b>0.5%</b>
Coal	2	1	1	1	1	0	0	-5.0%	0.8%	-2.3%	-2.7%	-5.4%	-8.3%
Oil	21	18	14	14	14	12	8	-1.2%	-2.3%	-0.3%	0.2%	-1.6%	-3.6%
Gas	5	4	4	4	4	3	2	-1.6%	-1.0%	0.0%	0.0%	-1.2%	-2.6%
Electricity	5	4	5	5	5	7	9	-1.7%	1.3%	0.2%	1.3%	2.5%	2.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	1	2	2	2	5	9	2.4%	4.4%	-0.3%	3.0%	8.1%	5.8%
<b>Transport</b>	<b>259</b>	<b>305</b>	<b>320</b>	<b>304</b>	<b>276</b>	<b>254</b>	<b>236</b>	<b>1.6%</b>	<b>0.5%</b>	<b>-0.5%</b>	<b>-1.0%</b>	<b>-0.8%</b>	<b>-0.7%</b>
Coal	0	0	0	0	0	0	0	-26.4%	1.7%	-3.5%	0.0%	0.0%	0.0%
Oil	253	297	300	273	212	161	121	1.6%	0.1%	-1.0%	-2.5%	-2.7%	-2.8%
Gas	0	0	1	3	13	23	31	5.3%	12.9%	9.5%	16.1%	5.4%	3.2%
Electricity	5	6	5	7	22	36	47	1.3%	-1.4%	2.3%	12.5%	5.3%	2.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	1	14	22	29	34	37	n.s.	34.1%	5.0%	2.8%	1.6%	0.8%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>134</b>	<b>119</b>	<b>128</b>	<b>124</b>	<b>122</b>	<b>122</b>	<b>118</b>	<b>-1.2%</b>	<b>0.7%</b>	<b>-0.3%</b>	<b>-0.1%</b>	<b>0.0%</b>	<b>-0.3%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Iceland	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	0.3	0.3	0.3	0.3	0.4	0.4	0.4	1.0%	1.2%	0.7%	0.6%	0.4%	0.2%
GDP per capita (ppp, k\$'05)	26	30	33	40	47	56	68	1.6%	0.9%	2.0%	1.7%	1.7%	2.1%
GDP per capita (mer, k\$'05)	41	49	56	69	82	97	119	1.6%	1.4%	2.1%	1.7%	1.7%	2.1%
Share Value Added - Agriculture (%)	12	9	7	7	7	7	7	-2.6%	-2.2%	-0.3%	-0.2%	-0.2%	-0.2%
Share Value Added - Industry (%)	31	26	25	22	19	16	13	-1.6%	-0.4%	-1.2%	-1.5%	-1.7%	-2.5%
Share Value Added - Services (%)	57	65	68	71	74	77	81	1.2%	0.4%	0.4%	0.4%	0.4%	0.5%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	13	15	18	-6.5%	7.4%	-4.3%	0.9%	1.5%	1.4%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	18	21	30	38	51	65	84	1.4%	3.8%	2.3%	3.0%	2.6%	2.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	5	4	4	7	6	6	6	-0.4%	-0.8%	5.6%	-1.3%	-0.1%	-0.7%
Total GHG (excl. sinks)	5	4	4	7	6	6	6	-0.3%	-0.6%	5.5%	-1.2%	-0.1%	-0.7%
Total GHG (energy, industry, agriculture)	3	3	3	6	5	5	5	-0.1%	-0.3%	6.6%	-1.4%	-0.1%	-0.8%
CO <sub>2</sub>	2	2	2	5	4	4	3	1.1%	-0.9%	8.4%	-1.2%	-0.4%	-1.6%
CH <sub>4</sub>	0	0	0	0	0	0	0	0.7%	0.4%	-1.3%	-1.0%	-0.5%	0.0%
N <sub>2</sub> O	1	0	0	1	1	1	1	-0.5%	-0.9%	8.1%	-1.6%	1.6%	1.7%
F gases	0	0	0	0	0	0	0	-9.0%	5.2%	-3.7%	-9.0%	-0.7%	-2.8%
Total GHG from Energy and Industry	3	3	3	5	5	5	4	0.1%	-0.4%	7.7%	-1.9%	0.0%	-1.1%
CO <sub>2</sub> Emissions from Fuel Comb.	2	2	2	4	4	3	3	0.7%	-0.9%	8.5%	-1.7%	-0.6%	-1.6%
Power generation/District heating	0	0	0	1	1	1	1	0.0%	0.0%	n.s.	-5.6%	2.8%	1.0%
Industry	1	1	0	1	1	1	1	0.8%	-4.9%	13.1%	1.4%	-2.0%	-4.8%
Buildings	0	0	0	0	0	0	0	-4.8%	-7.5%	25.3%	2.5%	0.9%	0.2%
Agriculture	1	1	1	1	0	0	0	1.0%	-2.2%	0.6%	-2.7%	-4.0%	-4.0%
Transport	1	1	1	1	1	1	0	0.5%	3.0%	-0.6%	-2.5%	-1.8%	-1.0%
Other	0	0	0	0	0	0	0	n.s.	n.s.	49.1%	1.7%	8.2%	1.0%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	15.0%	6.4%
Coal	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	16.0%	6.4%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	12.0%	2.8%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	8.6%	11.4%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	1	2	5	6	7	7	7	10.5%	11.3%	1.3%	2.5%	0.0%	-0.4%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Natural gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	6.2%	0.9%	2.1%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	12.6%	1.6%	-1.6%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	1	1	1	1	1	1	4.2%	7.1%	0.2%	0.2%	0.2%	0.2%
Other renewables	0	1	4	4	6	6	5	16.0%	12.9%	1.4%	2.8%	-0.1%	-0.5%
Net Imports	1	1	1	1	1	1	1						
Coal	0	0	0	1	1	1	0						
Oil	1	1	1	1	0	0	0						
Natural gas	0	0	0	0	0	0	1						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	1	2	6	7	8	9	8	6.5%	8.7%	2.3%	1.8%	0.2%	-0.2%
Coal	0	0	0	1	1	1	0	4.6%	-1.1%	18.0%	0.9%	-0.1%	-1.3%
Oil	1	1	1	1	0	0	0	0.2%	-1.3%	3.4%	-4.2%	-3.0%	-2.4%
Natural gas	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	4.5%	8.2%	3.0%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	12.3%	4.0%	1.4%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	1	1	1	1	1	1	4.2%	7.1%	0.2%	0.2%	0.2%	0.2%
Other renewables	0	1	4	4	6	6	5	16.0%	12.9%	1.4%	2.8%	-0.1%	-0.5%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	1	2	6	7	8	9	8	6.5%	8.7%	2.3%	1.8%	0.2%	-0.2%
Energy for Power Generation	1	2	5	6	8	8	8	10.8%	11.4%	1.8%	2.0%	0.1%	-0.2%
Other Energy Transformation & Losses	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Final consumption	2	2	3	3	3	3	3	0.9%	3.7%	1.9%	0.7%	0.2%	-0.1%
Steel, Non-Met. Minerals and Chem.	0	0	0	1	1	1	0	3.9%	-1.0%	11.5%	1.4%	-0.6%	-1.7%
Other Industry	0	0	1	1	1	2	2	5.5%	8.9%	1.7%	0.9%	0.6%	0.1%
Non-Energy Use	0	0	0	0	0	0	0	-5.4%	-6.9%	-5.5%	-1.3%	-1.3%	-1.5%
Residential	1	0	0	0	0	0	0	-6.0%	2.0%	-0.8%	-0.1%	-0.4%	-0.4%
Services	0	0	0	0	0	0	0	10.6%	1.9%	-0.3%	0.9%	0.8%	1.1%
Agriculture	0	0	0	0	0	0	0	1.0%	-1.9%	1.0%	1.0%	0.8%	0.7%
Road	0	0	0	0	0	0	0	0.9%	2.9%	0.1%	-1.2%	-0.6%	-0.2%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	1.5%	1.4%	1.5%
Aviation	0	0	0	0	0	0	0	-2.0%	-1.2%	-2.2%	0.0%	0.6%	0.4%
Other Transport	0	0	0	0	0	0	0	-12.4%	8.2%	-6.5%	0.2%	-0.4%	-0.6%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Iceland	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>15.7%</b>	<b>12.9%</b>	<b>8.1%</b>	<b>0.0%</b>	<b>1.7%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-1.6%	1.4%	-0.9%
Oil	0	0	0	0	0	0	0	0.0%	0.0%	n.s.	-15.4%	-21.1%	n.s.
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	3.6%	10.7%	3.4%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	0.5%	-0.4%	-0.2%
Other	0	0	0	0	1	1	1	16.0%	12.9%	1.4%	2.6%	-0.2%	-0.6%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>5</b>	<b>8</b>	<b>17</b>	<b>20</b>	<b>22</b>	<b>24</b>	<b>25</b>	<b>5.5%</b>	<b>8.3%</b>	<b>1.6%</b>	<b>1.0%</b>	<b>0.8%</b>	<b>0.4%</b>
Coal	0	0	0	1	1	1	1	n.s.	n.s.	n.s.	-1.6%	1.3%	-0.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	11.9%	4.0%
Oil	0	0	0	1	0	0	0	-1.8%	-8.8%	n.s.	-15.4%	-21.3%	n.s.
Gas	0	0	0	0	1	2	2	n.s.	n.s.	n.s.	4.1%	11.4%	3.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	11.8%	1.2%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	1.1%	-0.1%	0.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	4	6	13	13	13	14	14	4.2%	7.1%	0.2%	0.2%	0.2%	0.2%
Wind	0	0	0	0	1	1	1	n.s.	n.s.	n.s.	19.3%	3.3%	0.9%
Solar	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	18.4%	10.9%	5.0%
Other	0	1	4	5	7	7	6	16.0%	12.9%	1.4%	2.6%	-0.1%	-0.2%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>3.9%</b>	<b>6.5%</b>	<b>4.6%</b>	<b>2.7%</b>	<b>1.9%</b>	<b>1.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	1.9%	-0.1%	-1.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	12.5%	4.8%
Oil	0	0	0	0	0	0	0	0.3%	-1.9%	10.6%	0.0%	-0.7%	-0.9%
Gas	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	7.1%	13.3%	3.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	12.5%	2.0%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	0.4%	-0.1%	0.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	1	1	2	2	2	2	2	3.5%	5.9%	0.6%	0.2%	0.2%	0.2%
Wind	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	19.1%	3.3%	0.8%
Solar	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	18.4%	10.9%	5.0%
Other	0	0	1	1	2	2	3	14.4%	12.8%	9.6%	3.8%	1.4%	0.7%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>0.9%</b>	<b>3.7%</b>	<b>1.9%</b>	<b>0.7%</b>	<b>0.2%</b>	<b>-0.1%</b>
Coal	0	0	0	0	0	0	0	4.6%	-0.9%	15.3%	1.7%	-0.6%	-1.8%
Oil	1	1	1	1	0	0	0	0.2%	-1.3%	0.7%	-2.2%	-2.4%	-2.3%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	6.0%	2.1%	0.9%
Electricity	0	1	1	2	2	2	2	5.9%	8.6%	1.9%	1.0%	0.8%	0.4%
Heat	1	0	1	0	0	0	0	-2.9%	1.7%	-2.6%	0.0%	-0.4%	-0.5%
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	14.4%	4.8%	2.2%
Share of Renewables <sup>3</sup> (%)	28%	38%	56%	50%	57%	59%	63%	3.0%	3.9%	-1.1%	1.2%	0.5%	0.5%
<b>Industry (incl. non-energy use)</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>4.0%</b>	<b>6.4%</b>	<b>3.6%</b>	<b>1.0%</b>	<b>0.3%</b>	<b>-0.4%</b>
Coal	0	0	0	0	0	0	0	4.6%	-0.9%	15.3%	1.7%	-0.6%	-1.8%
Oil	0	0	0	0	0	0	0	-0.2%	-9.4%	4.1%	0.1%	-1.1%	-2.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	10.2%	2.9%	-0.2%
Electricity	0	0	1	1	2	2	2	7.4%	9.9%	1.8%	0.9%	0.6%	0.1%
Heat	0	0	0	0	0	0	0	-9.3%	1.2%	0.7%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	9.5%	-0.8%	2.1%
<b>Buildings</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>-1.7%</b>	<b>1.9%</b>	<b>-0.6%</b>	<b>0.4%</b>	<b>0.2%</b>	<b>0.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	-4.8%	-7.5%	15.9%	1.4%	0.2%	-0.5%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	3.4%	1.4%	0.7%
Electricity	0	0	0	0	0	0	0	2.4%	3.1%	1.8%	0.6%	1.2%	1.8%
Heat	1	0	1	0	0	0	0	-2.5%	1.7%	-2.7%	0.0%	-0.4%	-0.5%
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-3.0%	-4.3%	-1.9%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0%</b>	<b>-1.9%</b>	<b>1.0%</b>	<b>1.0%</b>	<b>0.8%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	1.0%	-2.2%	0.6%	-2.7%	-4.0%	-4.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	0.9%	1.1%	1.9%	5.9%	4.6%	2.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	30.2%	6.1%	2.6%
<b>Transport</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0%</b>	<b>2.9%</b>	<b>-0.1%</b>	<b>-1.1%</b>	<b>-0.5%</b>	<b>-0.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	0.0%	2.9%	-0.6%	-2.9%	-2.1%	-1.4%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	17.1%	3.7%	2.2%
Electricity	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	19.4%	4.6%	2.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	8.5%	3.4%	1.1%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Norway	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	4	4	5	6	6	7	8	0.6%	0.8%	1.4%	1.4%	1.1%	0.8%
GDP per capita (ppp, k\$'05)	32	44	47	49	53	56	60	3.1%	0.7%	0.5%	0.6%	0.6%	0.7%
GDP per capita (mer, k\$'05)	46	62	67	68	73	77	82	3.1%	0.7%	0.3%	0.6%	0.6%	0.7%
Share Value Added - Agriculture (%)	3	2	2	2	2	2	2	-4.8%	-2.7%	-0.1%	-0.1%	-0.1%	-0.1%
Share Value Added - Industry (%)	34	42	40	39	36	34	32	2.1%	-0.5%	-0.3%	-0.6%	-0.6%	-0.8%
Share Value Added - Services (%)	63	56	59	60	62	64	67	-1.1%	0.5%	0.2%	0.4%	0.3%	0.4%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	13	15	18	-6.5%	7.4%	-4.3%	0.9%	1.5%	1.4%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	18	21	30	38	51	65	84	1.4%	3.8%	2.3%	3.0%	2.6%	2.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	39	28	26	29	20	15	13	-3.3%	-0.7%	1.0%	-3.3%	-2.7%	-1.5%
Total GHG (excl. sinks)	50	53	54	53	47	46	45	0.7%	0.2%	-0.3%	-1.1%	-0.2%	-0.2%
Total GHG (energy, industry, agriculture)	49	52	53	52	47	46	45	0.5%	0.2%	-0.1%	-0.9%	-0.2%	-0.2%
CO <sub>2</sub>	32	38	43	43	40	39	38	1.7%	1.2%	0.1%	-0.8%	-0.1%	-0.3%
CH <sub>4</sub>	5	5	4	4	3	3	3	0.0%	-1.1%	-1.7%	-1.3%	-0.9%	0.0%
N <sub>2</sub> O	6	6	4	4	4	4	4	-0.2%	-3.5%	-0.2%	-0.3%	-0.8%	0.0%
F gases	6	3	1	1	0	0	0	-7.5%	-7.6%	-1.9%	-9.8%	0.7%	-0.4%
Total GHG from Energy and Industry	44	47	48	47	42	41	40	0.6%	0.3%	-0.3%	-1.1%	-0.1%	-0.3%
CO <sub>2</sub> Emissions from Fuel Comb.	27	32	38	38	35	34	33	1.5%	1.8%	-0.1%	-0.9%	-0.2%	-0.2%
Power generation/District heating	0	0	2	1	1	1	1	3.3%	28.4%	-5.8%	-2.5%	4.6%	-2.2%
Industry	6	6	7	8	7	7	6	1.5%	1.0%	1.0%	-0.4%	-0.9%	-1.9%
Buildings	3	1	2	1	1	1	0	-5.2%	0.3%	-5.4%	-3.1%	-2.0%	-1.4%
Agriculture	1	2	2	2	1	1	1	2.6%	0.7%	-1.7%	-2.8%	-4.1%	-4.2%
Transport	10	12	14	15	12	11	9	1.5%	1.8%	0.6%	-1.7%	-1.5%	-1.5%
Other	8	10	12	12	12	14	16	2.9%	1.2%	0.0%	0.3%	1.3%	1.7%
CO <sub>2</sub> captured (CCS)	0	0	0	0	1	6	13	n.s.	n.s.	n.s.	n.s.	16.5%	7.8%
Coal	0	0	0	0	0	4	8	n.s.	n.s.	n.s.	n.s.	29.2%	7.7%
Gas	0	0	0	0	1	2	2	n.s.	n.s.	n.s.	n.s.	7.8%	1.3%
Biomass	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	8.7%	42.1%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	117	220	207	168	131	95	85	6.5%	-0.6%	-2.1%	-2.5%	-3.1%	-1.1%
Coal	0	0	1	2	2	2	3	8.6%	11.5%	3.6%	-0.9%	2.0%	2.4%
Oil	85	165	105	77	45	23	15	6.9%	-4.4%	-3.0%	-5.3%	-6.5%	-4.3%
Natural gas	21	41	89	72	66	51	48	6.8%	8.0%	-2.0%	-0.9%	-2.6%	-0.6%
Biomass	1	1	1	4	4	4	4	2.8%	0.7%	10.9%	0.6%	-0.2%	0.0%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	10.7%	6.8%
Hydro	10	12	10	12	12	12	12	1.6%	-1.9%	1.4%	0.2%	0.1%	0.1%
Other renewables	0	0	0	1	2	3	4	n.s.	38.4%	23.6%	9.6%	5.3%	2.4%
Net Imports	-96	-194	-173	-134	-95	-56	-43						
Coal	1	1	0	0	0	0	1						
Oil	-76	-156	-92	-64	-33	-12	-5						
Natural gas	-19	-37	-81	-67	-60	-43	-38						
Biomass	0	0	0	-1	0	1	1						
Biofuels	0	0	0	0	0	0	0						
Electricity	-1	-2	1	-1	-1	-1	-1						
Primary Energy Demand <sup>2</sup>	21	26	34	34	36	39	42	2.1%	2.6%	-0.1%	0.6%	0.8%	0.7%
Coal	1	1	1	2	2	3	4	2.0%	-2.5%	5.4%	0.9%	3.9%	3.2%
Oil	8	9	13	13	12	11	10	0.7%	3.8%	0.1%	-1.2%	-1.0%	-1.0%
Natural gas	2	4	8	5	6	8	9	7.7%	6.4%	-3.8%	1.8%	2.1%	2.1%
Biomass	1	1	1	3	4	5	5	2.9%	1.0%	7.1%	4.0%	1.0%	0.4%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	10.7%	6.8%
Hydro	10	12	10	12	12	12	12	1.6%	-1.9%	1.4%	0.2%	0.1%	0.1%
Other renewables	0	0	0	1	2	3	4	n.s.	38.4%	23.6%	9.6%	5.3%	2.4%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	21	26	34	34	36	39	42	2.1%	2.6%	-0.1%	0.6%	0.8%	0.7%
Energy for Power Generation	11	12	11	15	16	19	21	1.6%	-1.0%	2.6%	1.3%	1.4%	1.3%
Other Energy Transformation & Losses	2	4	12	8	9	11	12	7.0%	12.6%	-3.5%	1.2%	1.4%	1.1%
Final consumption	17	20	21	22	22	23	24	1.3%	0.7%	0.1%	0.3%	0.4%	0.3%
Steel, Non-Met. Minerals and Chem.	2	3	2	3	4	3	3	1.8%	-1.2%	3.4%	0.2%	-0.5%	-0.8%
Other Industry	4	4	4	4	4	5	5	1.0%	-1.2%	0.4%	0.7%	0.9%	0.8%
Non-Energy Use	2	2	2	2	2	2	2	1.6%	0.5%	0.2%	-0.3%	-0.3%	-0.5%
Residential	4	4	4	4	4	5	5	0.6%	1.5%	-1.2%	0.8%	1.0%	0.9%
Services	2	2	3	3	3	3	4	0.4%	3.0%	-1.3%	1.0%	1.2%	1.3%
Agriculture	1	1	1	1	1	1	1	4.2%	0.7%	-0.9%	1.0%	0.8%	0.7%
Road	3	3	4	4	3	3	3	1.4%	1.9%	0.1%	-0.9%	-0.6%	-0.9%
Rail	0	0	0	0	0	0	0	-2.2%	0.2%	0.7%	1.1%	0.8%	0.7%
Aviation	0	0	0	0	1	1	1	13.4%	2.4%	2.2%	1.5%	1.7%	1.2%
Other Transport	1	1	1	1	1	1	1	1.1%	1.3%	-1.3%	-0.2%	-0.8%	-1.4%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Norway	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	0	0	1	2	3	4	6	3.1%	22.1%	8.4%	2.6%	3.0%	3.6%
Coal	0	0	0	0	0	1	2	0.1%	1.6%	3.3%	6.7%	31.4%	7.8%
Oil	0	0	0	0	0	0	0	-8.8%	10.6%	n.s.	n.s.	n.s.	n.s.
Gas	0	0	1	0	0	1	1	n.s.	39.8%	-6.4%	-1.1%	4.8%	5.6%
Biomass & Waste	0	0	0	2	3	2	3	1.9%	8.9%	24.8%	3.2%	-0.5%	0.7%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	122	143	124	151	167	187	206	1.6%	-1.4%	2.1%	1.0%	1.1%	1.0%
Coal	0	0	0	0	0	5	10	-1.3%	3.8%	5.4%	5.2%	31.9%	8.2%
of which CCS	0	0	0	0	0	5	9	n.s.	n.s.	n.s.	n.s.	31.3%	7.2%
Oil	0	0	0	0	0	0	0	4.1%	13.2%	n.s.	n.s.	n.s.	n.s.
Gas	0	0	5	2	2	3	6	n.s.	36.9%	-7.1%	-1.0%	5.1%	6.0%
of which CCS	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	30.3%	6.3%
Biomass & Waste	0	0	0	7	10	9	11	1.7%	4.7%	31.7%	3.3%	-0.4%	1.4%
of which CCS	0	0	0	0	0	0	3	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	121	142	117	134	137	139	141	1.6%	-1.9%	1.4%	0.2%	0.1%	0.1%
Wind	0	0	1	7	17	28	35	n.s.	40.5%	23.2%	8.5%	5.4%	2.2%
Solar	0	0	0	0	1	2	3	n.s.	4.2%	33.5%	20.1%	6.4%	5.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	33.7%	16.5%	11.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	27	28	33	45	57	65	69	0.5%	1.4%	3.2%	2.3%	1.5%	0.6%
Coal	0	0	0	4	7	9	9	5.9%	-4.6%	55.6%	5.3%	2.5%	-0.2%
of which CCS	0	0	0	0	1	4	7	n.s.	n.s.	n.s.	n.s.	15.8%	7.0%
Oil	0	0	0	1	2	2	2	-17.6%	7.2%	41.0%	5.2%	-0.4%	-0.7%
Gas	0	0	1	3	6	8	7	n.s.	44.5%	8.2%	7.0%	2.4%	-0.6%
of which CCS	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	16.7%	4.9%
Biomass & Waste	0	0	0	1	1	1	2	7.7%	-1.7%	27.8%	0.4%	-0.7%	1.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	27	28	31	32	33	33	34	0.5%	0.9%	0.4%	0.2%	0.1%	0.1%
Wind	0	0	0	3	6	11	13	n.s.	42.1%	20.8%	8.3%	5.1%	2.0%
Solar	0	0	0	0	1	2	3	n.s.	4.2%	33.5%	20.1%	6.4%	5.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.0%	11.0%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	17	20	21	22	22	23	24	1.3%	0.7%	0.1%	0.3%	0.4%	0.3%
Coal	1	1	1	2	2	2	1	2.1%	-4.0%	8.6%	0.7%	-0.6%	-1.3%
Oil	7	8	9	8	6	5	4	0.2%	1.3%	-0.9%	-2.1%	-2.0%	-2.1%
Gas	0	1	1	1	1	2	2	n.s.	2.0%	3.9%	3.0%	1.6%	0.6%
Electricity	8	9	10	10	11	12	14	1.2%	0.4%	0.1%	1.1%	1.2%	1.1%
Heat	0	0	0	0	1	1	1	5.6%	11.6%	1.1%	3.7%	1.7%	0.8%
Biomass & Other	1	1	1	1	1	2	2	2.9%	0.8%	-3.5%	3.3%	2.5%	1.0%
Share of Renewables <sup>3</sup> (%)	67%	70%	55%	64%	72%	78%	81%	0.3%	-2.4%	1.5%	1.3%	0.8%	0.4%
<b>Industry (incl. non-energy use)</b>	8	9	8	10	10	10	10	1.4%	-0.7%	1.3%	0.3%	0.2%	0.0%
Coal	1	1	1	2	2	2	1	2.2%	-4.0%	8.5%	0.7%	-0.6%	-1.3%
Oil	3	2	3	2	2	2	1	-1.3%	1.4%	-1.4%	-1.8%	-1.8%	-1.9%
Gas	0	1	1	1	1	1	1	n.s.	1.3%	3.5%	1.7%	0.9%	-0.2%
Electricity	4	4	4	4	5	5	5	1.2%	-1.5%	1.2%	0.5%	0.8%	0.8%
Heat	0	0	0	0	0	0	0	1.9%	7.1%	2.3%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	1	0	0	0	1	1	4.6%	-3.1%	-4.1%	3.5%	2.7%	2.0%
<b>Buildings</b>	6	6	7	6	7	8	9	0.5%	2.0%	-1.2%	0.9%	1.1%	1.1%
Coal	0	0	0	0	0	0	0	-7.8%	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	0	0	0	0	0	0	-5.1%	0.0%	-6.7%	-5.2%	-4.1%	-3.0%
Gas	0	0	0	0	0	0	0	n.s.	36.3%	8.4%	4.3%	1.5%	0.3%
Electricity	4	5	6	5	6	7	7	1.1%	1.8%	-0.7%	0.9%	1.2%	1.2%
Heat	0	0	0	0	1	1	1	6.5%	12.3%	1.0%	4.2%	1.9%	0.9%
Biomass & Other	1	1	1	0	0	0	0	1.5%	2.2%	-4.6%	-1.2%	-0.5%	-0.2%
<b>Agriculture</b>	1	1	1	1	1	1	1	4.2%	0.7%	-0.9%	1.0%	0.8%	0.7%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	1	1	1	0	0	0	2.7%	0.4%	-1.6%	-2.8%	-4.2%	-4.2%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	-3.3%	-1.9%	-2.9%	-2.9%
Electricity	0	0	0	0	0	0	0	12.0%	0.4%	1.0%	3.7%	2.8%	2.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	10.2%	11.5%	25.9%	6.4%	2.6%
<b>Transport</b>	3	4	5	5	5	5	4	1.8%	1.8%	0.1%	-0.5%	-0.3%	-0.6%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	4	5	5	4	3	3	1.8%	1.5%	-0.1%	-2.0%	-1.8%	-1.9%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	24.6%	17.4%	5.2%	3.4%
Electricity	0	0	0	0	0	1	1	-0.4%	1.0%	3.8%	15.1%	5.1%	2.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	2.5%	7.9%	3.8%	0.0%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	2	4	12	8	9	11	12	7.0%	12.6%	-3.5%	1.2%	1.4%	1.1%

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Switzerland	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	7	7	8	9	9	10	10	0.7%	0.9%	1.0%	0.6%	0.5%	0.4%
GDP per capita (ppp, k\$'05)	35	36	39	41	46	52	58	0.4%	0.8%	0.5%	1.2%	1.2%	1.1%
GDP per capita (mer, k\$'05)	50	53	58	61	69	77	86	0.5%	1.0%	0.6%	1.2%	1.2%	1.1%
Share Value Added - Agriculture (%)	15	9	5	5	5	5	5	-4.7%	-5.5%	-0.1%	-0.1%	-0.1%	-0.1%
Share Value Added - Industry (%)	31	27	26	25	23	20	18	-1.6%	-0.2%	-0.3%	-1.0%	-1.1%	-1.2%
Share Value Added - Services (%)	54	64	69	70	72	75	77	1.8%	0.7%	0.1%	0.4%	0.3%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	13	15	18	-6.5%	7.4%	-4.3%	0.9%	1.5%	1.4%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	18	21	30	38	51	65	84	1.4%	3.8%	2.3%	3.0%	2.6%	2.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	50	49	49	46	34	27	19	-0.2%	0.1%	-0.7%	-2.9%	-2.2%	-3.5%
Total GHG (excl. sinks)	52	49	50	47	35	29	20	-0.5%	0.2%	-0.7%	-2.7%	-2.1%	-3.6%
Total GHG (energy, industry, agriculture)	52	49	50	47	35	29	20	-0.6%	0.2%	-0.7%	-2.7%	-2.1%	-3.6%
CO <sub>2</sub>	43	41	42	39	29	22	14	-0.6%	0.2%	-0.7%	-2.9%	-2.5%	-4.8%
CH <sub>4</sub>	5	4	4	4	3	3	3	-1.3%	-0.6%	-0.6%	-0.5%	-0.1%	-0.2%
N <sub>2</sub> O	4	3	3	3	3	3	3	-0.7%	-0.1%	-0.4%	-1.6%	-0.5%	-0.2%
F gases	0	1	1	1	0	0	0	11.6%	6.2%	-1.3%	-11.1%	0.6%	0.1%
Total GHG from Energy and Industry	46	44	45	41	30	23	15	-0.5%	0.2%	-0.8%	-3.2%	-2.5%	-4.6%
CO <sub>2</sub> Emissions from Fuel Comb.	40	39	40	36	27	20	12	-0.4%	0.2%	-0.8%	-3.1%	-2.7%	-5.3%
Power generation/District heating	1	1	1	0	0	0	-3	-1.1%	-0.1%	-12.5%	-2.6%	0.8%	n.s.
Industry	5	5	5	5	4	4	3	-0.7%	-0.6%	0.3%	-1.0%	-1.4%	-2.5%
Buildings	19	16	17	11	7	5	4	-1.4%	0.2%	-4.2%	-3.8%	-3.4%	-2.9%
Agriculture	0	0	0	0	0	0	0	-5.1%	-16.9%	4.5%	-1.9%	-2.9%	-3.0%
Transport	14	16	16	19	14	10	8	0.8%	0.3%	1.6%	-3.2%	-2.8%	-2.8%
Other	1	1	1	2	1	1	0	3.8%	2.2%	1.4%	-3.9%	-2.7%	-8.0%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	1	7	n.s.	n.s.	n.s.	n.s.	6.9%	23.7%
Coal	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	7.2%	13.3%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	0.1%	17.0%
Biomass	0	0	0	0	0	0	4	n.s.	n.s.	n.s.	n.s.	7.7%	47.4%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	10	12	13	13	16	18	18	1.5%	0.4%	0.5%	2.1%	1.2%	0.1%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Natural gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	6.5%	1.1%	2.2%
Biomass	1	2	2	2	2	2	3	2.1%	2.6%	-2.3%	1.6%	0.2%	4.4%
Nuclear <sup>1</sup>	6	7	7	7	9	10	8	1.1%	0.0%	0.3%	2.5%	1.0%	-2.5%
Hydro	3	3	3	3	3	3	3	2.1%	-0.1%	0.4%	0.0%	0.0%	0.0%
Other renewables	0	0	0	1	2	3	4	18.5%	13.6%	31.3%	7.0%	4.8%	3.9%
Net Imports	14	13	14	13	9	7	7						
Coal	0	0	0	0	0	0	1						
Oil	12	11	10	10	7	5	4						
Natural gas	2	2	3	3	3	3	2						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	-1	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	24	25	26	26	26	26	25	0.4%	0.4%	-0.1%	-0.1%	0.0%	-0.3%
Coal	0	0	0	0	0	0	1	-8.6%	0.0%	7.6%	2.3%	1.9%	6.6%
Oil	12	11	10	10	7	5	4	-0.8%	-0.6%	0.1%	-3.8%	-3.4%	-3.3%
Natural gas	2	2	3	3	3	3	2	4.0%	2.1%	-0.9%	-0.2%	-0.7%	-0.4%
Biomass	1	2	2	1	2	2	3	2.0%	2.7%	-4.8%	2.3%	0.8%	5.7%
Nuclear <sup>1</sup>	6	7	7	7	9	10	8	1.1%	0.0%	0.3%	2.5%	1.0%	-2.5%
Hydro	3	3	3	3	3	3	3	2.1%	-0.1%	0.4%	0.0%	0.0%	0.0%
Other renewables	0	0	0	1	2	3	4	18.5%	13.6%	31.3%	7.0%	4.8%	3.9%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	24	25	26	26	26	26	25	0.4%	0.4%	-0.1%	-0.1%	0.0%	-0.3%
Energy for Power Generation	10	11	12	11	14	16	17	1.6%	0.2%	-0.1%	2.2%	1.3%	0.5%
Other Energy Transformation & Losses	0	-1	0	0	1	1	1	n.s.	n.s.	n.s.	3.7%	2.6%	1.9%
Final consumption	19	19	21	20	19	18	18	0.3%	0.7%	-0.2%	-0.8%	-0.4%	-0.2%
Steel, Non-Met. Minerals and Chem.	1	1	1	2	2	2	1	1.0%	0.7%	2.0%	0.1%	-0.7%	-1.0%
Other Industry	2	2	2	2	2	2	2	1.0%	0.0%	-0.5%	0.2%	0.2%	0.1%
Non-Energy Use	1	1	1	0	0	0	0	0.2%	-0.6%	-1.0%	-1.9%	-1.3%	-1.2%
Residential	6	5	6	5	5	5	5	-0.8%	1.4%	-2.0%	-0.7%	-0.3%	0.0%
Services	3	3	4	3	3	4	4	0.0%	1.2%	-1.5%	0.0%	0.4%	0.7%
Agriculture	0	0	0	0	0	0	0	1.0%	-5.2%	0.9%	0.9%	0.9%	0.9%
Road	5	5	6	7	6	5	4	1.4%	0.3%	1.7%	-1.9%	-1.4%	-1.2%
Rail	0	0	0	0	0	0	0	0.3%	1.8%	0.1%	1.1%	1.0%	0.9%
Aviation	0	0	0	0	0	0	0	-4.9%	-2.8%	5.0%	-0.5%	0.3%	0.0%
Other Transport	0	0	0	0	0	0	0	2.3%	-1.0%	-1.0%	-0.6%	-0.9%	-1.5%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Switzerland	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>3.1%</b>	<b>2.2%</b>	<b>-26.3%</b>	<b>-2.6%</b>	<b>0.8%</b>	<b>43.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	-10.1%	-13.2%	n.s.	n.s.	n.s.	n.s.
Gas	0	0	0	0	0	0	0	9.0%	2.0%	-12.0%	-2.6%	0.8%	12.4%
Biomass & Waste	1	1	1	0	0	0	1	4.0%	2.7%	n.s.	n.s.	n.s.	n.s.
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>56</b>	<b>68</b>	<b>68</b>	<b>75</b>	<b>89</b>	<b>101</b>	<b>113</b>	<b>1.9%</b>	<b>0.1%</b>	<b>1.1%</b>	<b>1.6%</b>	<b>1.3%</b>	<b>1.1%</b>
Coal	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	-5.2%	-11.2%	n.s.	n.s.	n.s.	n.s.
Gas	0	1	1	0	0	0	1	10.0%	1.9%	-10.0%	-2.5%	0.8%	13.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	1	2	2	0	0	0	7	8.1%	3.2%	n.s.	n.s.	n.s.	n.s.
of which CCS	0	0	0	0	0	0	5	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	24	26	26	27	35	40	31	1.1%	0.0%	0.3%	2.7%	1.2%	-2.4%
Hydro	31	38	38	39	39	39	39	2.1%	-0.1%	0.4%	0.0%	0.0%	0.0%
Wind	0	0	0	6	9	14	20	n.s.	42.0%	50.2%	4.7%	4.1%	3.9%
Solar	0	0	0	3	4	7	12	21.3%	22.0%	35.9%	5.3%	5.6%	4.6%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.2%	14.8%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>16</b>	<b>20</b>	<b>20</b>	<b>28</b>	<b>34</b>	<b>42</b>	<b>46</b>	<b>1.7%</b>	<b>0.1%</b>	<b>3.6%</b>	<b>1.8%</b>	<b>2.2%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	1	1	n.s.	n.s.	13.3%	3.7%	4.2%	4.6%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	19.9%	8.9%
Oil	0	0	0	0	0	0	1	-6.1%	13.0%	3.3%	2.6%	2.3%	3.0%
Gas	0	0	0	0	1	1	1	8.7%	2.0%	4.3%	4.4%	3.5%	2.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	20.3%	6.4%
Biomass & Waste	0	0	0	3	4	4	4	7.0%	-3.5%	22.6%	3.4%	1.2%	-0.2%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	41.3%
Nuclear	3	3	3	4	5	5	4	0.8%	0.2%	0.8%	2.7%	1.2%	-2.7%
Hydro	13	16	15	16	16	16	16	1.8%	0.0%	0.2%	0.0%	0.0%	0.0%
Wind	0	0	0	3	4	8	9	n.s.	31.2%	53.1%	3.9%	6.0%	0.7%
Solar	0	0	0	2	4	7	11	21.3%	22.0%	35.9%	5.3%	5.9%	4.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	15.6%	14.2%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>19</b>	<b>19</b>	<b>21</b>	<b>20</b>	<b>19</b>	<b>18</b>	<b>18</b>	<b>0.3%</b>	<b>0.7%</b>	<b>-0.2%</b>	<b>-0.8%</b>	<b>-0.4%</b>	<b>-0.2%</b>
Coal	0	0	0	0	0	0	0	-8.9%	0.5%	6.7%	0.9%	1.0%	0.9%
Oil	12	11	11	10	6	4	3	-0.4%	-0.3%	-1.0%	-4.0%	-3.6%	-3.6%
Gas	1	2	3	3	3	2	2	3.6%	2.3%	-0.1%	-0.1%	-0.7%	-0.9%
Electricity	4	5	5	5	6	7	8	1.2%	1.3%	0.3%	1.8%	1.4%	1.2%
Heat	0	0	1	1	1	2	2	3.0%	5.0%	1.7%	4.0%	2.2%	1.4%
Biomass & Other	1	1	1	1	2	2	2	0.6%	2.7%	1.5%	2.0%	0.6%	0.2%
Share of Renewables <sup>3</sup> (%)	19%	22%	22%	27%	38%	47%	61%	1.5%	0.1%	2.0%	3.5%	2.3%	2.5%
<b>Industry (incl. non-energy use)</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>0.9%</b>	<b>0.1%</b>	<b>0.3%</b>	<b>0.0%</b>	<b>-0.3%</b>	<b>-0.4%</b>
Coal	0	0	0	0	0	0	0	-9.1%	0.4%	7.1%	1.1%	1.0%	0.9%
Oil	1	1	1	1	1	1	0	0.3%	-2.0%	-2.6%	-2.6%	-2.4%	-2.5%
Gas	1	1	1	1	1	1	1	2.3%	2.0%	1.2%	-1.1%	-1.4%	-1.9%
Electricity	1	2	2	2	2	2	2	0.5%	0.6%	0.0%	0.6%	0.5%	0.5%
Heat	0	0	0	0	0	0	0	10.4%	1.9%	-0.4%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	0	0	1	1	1	1	7.5%	0.1%	3.0%	2.4%	0.2%	-0.6%
<b>Buildings</b>	<b>9</b>	<b>9</b>	<b>10</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>-0.5%</b>	<b>1.3%</b>	<b>-1.8%</b>	<b>-0.4%</b>	<b>0.0%</b>	<b>0.3%</b>
Coal	0	0	0	0	0	0	0	-4.6%	2.2%	-3.6%	-14.2%	n.s.	n.s.
Oil	5	4	4	2	1	1	1	-2.3%	-0.6%	-5.4%	-4.9%	-4.5%	-3.7%
Gas	1	1	2	2	1	1	1	3.8%	2.9%	-1.3%	-1.8%	-2.0%	-2.0%
Electricity	2	3	3	3	4	4	5	1.7%	1.7%	0.3%	1.1%	1.3%	1.3%
Heat	0	0	1	1	1	1	2	0.8%	6.3%	2.3%	4.8%	2.5%	1.5%
Biomass & Other	1	1	1	1	1	1	1	-3.0%	4.5%	-0.1%	0.2%	-0.5%	-0.5%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0%</b>	<b>-5.2%</b>	<b>0.9%</b>	<b>0.9%</b>	<b>0.9%</b>	<b>0.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Gas	0	0	0	0	0	0	0	n.s.	-16.9%	4.5%	-1.9%	-2.9%	-3.0%
Electricity	0	0	0	0	0	0	0	1.2%	0.1%	0.4%	1.4%	1.3%	1.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	40.5%	-5.0%	-0.1%	1.7%	1.5%	1.0%
<b>Transport</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>1.2%</b>	<b>0.3%</b>	<b>1.7%</b>	<b>-1.8%</b>	<b>-1.2%</b>	<b>-1.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	5	6	6	7	4	3	2	1.3%	0.2%	1.5%	-3.8%	-3.5%	-3.7%
Gas	0	0	0	0	0	1	1	n.s.	n.s.	16.9%	17.9%	3.9%	1.8%
Electricity	0	0	0	0	1	1	1	0.3%	1.8%	1.8%	9.9%	3.6%	1.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	23.0%	12.0%	4.9%	2.7%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>0</b>	<b>-1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>3.7%</b>	<b>2.6%</b>	<b>1.9%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Other Balkans	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	24	23	23	22	21	20	19	-0.5%	-0.3%	-0.2%	-0.3%	-0.6%	-0.7%
GDP per capita (ppp, k\$'05)	5	4	7	8	11	15	20	-0.9%	4.1%	1.9%	3.2%	3.6%	2.8%
GDP per capita (mer, k\$'05)	0	2	3	3	5	7	9	14.0%	4.6%	1.9%	3.2%	3.6%	2.8%
Share Value Added - Agriculture (%)	17	16	12	11	9	8	7	-0.5%	-2.9%	-1.1%	-1.7%	-1.4%	-0.8%
Share Value Added - Industry (%)	46	25	24	22	21	20	19	-5.9%	-0.2%	-1.0%	-0.3%	-0.4%	-0.5%
Share Value Added - Services (%)	37	59	64	67	69	72	73	4.7%	0.8%	0.6%	0.3%	0.3%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	13	15	18	-6.5%	7.4%	-4.3%	0.9%	1.5%	1.4%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	18	21	30	38	51	65	84	1.4%	3.8%	2.3%	3.0%	2.6%	2.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	129	76	120	126	119	122	96	-5.2%	4.7%	0.4%	-0.6%	0.2%	-2.4%
Total GHG (excl. sinks)	130	95	121	127	121	124	106	-3.1%	2.5%	0.5%	-0.5%	0.3%	-1.6%
Total GHG (energy, industry, agriculture)	129	93	120	122	113	118	99	-3.3%	2.6%	0.1%	-0.7%	0.4%	-1.7%
CO <sub>2</sub>	102	72	90	88	84	86	73	-3.4%	2.3%	-0.2%	-0.4%	0.2%	-1.6%
CH <sub>4</sub>	17	12	11	11	10	10	9	-3.5%	-0.7%	0.1%	-1.1%	0.2%	-1.6%
N <sub>2</sub> O	9	6	10	11	11	12	11	-4.4%	5.4%	0.6%	0.7%	0.6%	-0.5%
F gases	1	3	9	12	7	10	5	8.5%	11.5%	2.4%	-4.4%	2.5%	-5.7%
Total GHG from Energy and Industry	113	81	106	106	97	100	82	-3.3%	2.7%	0.0%	-0.9%	0.3%	-2.0%
CO <sub>2</sub> Emissions from Fuel Comb.	97	70	86	84	80	81	68	-3.3%	2.1%	-0.3%	-0.5%	0.1%	-1.7%
Power generation/District heating	52	47	52	52	48	47	36	-1.0%	1.1%	0.0%	-0.9%	-0.2%	-2.7%
Industry	17	8	10	9	9	9	9	-6.9%	1.6%	-0.5%	-0.4%	0.2%	0.0%
Buildings	14	5	6	4	4	4	3	-10.3%	1.6%	-2.6%	-1.0%	-0.7%	-2.1%
Agriculture	0	1	1	1	1	1	1	9.7%	-4.7%	4.5%	0.8%	0.8%	-0.1%
Transport	8	6	13	12	12	12	12	-2.4%	7.2%	-0.4%	-0.5%	0.2%	-0.4%
Other	6	2	5	5	6	8	7	-7.9%	7.3%	-0.7%	2.8%	2.2%	-0.4%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	4	n.s.	n.s.	n.s.	n.s.	24.3%	30.9%
Coal	0	0	0	0	0	0	4	n.s.	n.s.	n.s.	n.s.	23.4%	31.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	18.1%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	12.8%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	23	20	22	13	15	17	19	-1.3%	1.1%	-5.4%	1.4%	1.3%	1.2%
Coal	17	14	15	4	4	4	4	-1.5%	0.6%	-12.6%	0.3%	0.6%	-0.5%
Oil	2	1	2	2	2	1	1	-5.3%	2.5%	0.3%	-0.6%	-1.3%	-2.0%
Natural gas	1	1	0	0	1	1	1	-1.4%	-6.4%	4.0%	2.1%	0.6%	0.6%
Biomass	2	2	2	4	5	6	6	-0.2%	2.1%	7.0%	1.9%	1.3%	1.1%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	8.7%	12.0%
Hydro	1	2	3	2	3	4	4	3.7%	3.9%	-1.4%	1.9%	1.5%	1.5%
Other renewables	0	0	0	0	0	1	3	n.s.	19.8%	30.1%	15.7%	9.7%	8.2%
Net Imports	9	4	9	18	18	19	17						
Coal	-1	-1	0	11	9	8	6						
Oil	7	4	7	6	6	6	5						
Natural gas	3	1	2	2	4	6	6						
Biomass	0	0	0	-1	-1	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	32	24	31	31	33	36	36	-2.9%	2.8%	-0.1%	0.5%	0.9%	0.0%
Coal	16	13	16	15	13	12	10	-2.1%	1.8%	-0.4%	-1.6%	-0.8%	-1.6%
Oil	9	5	9	8	7	7	7	-6.4%	5.8%	-1.2%	-0.3%	0.2%	-1.1%
Natural gas	3	2	2	3	5	7	7	-6.0%	1.9%	2.4%	5.9%	3.2%	0.1%
Biomass	2	2	2	3	4	5	6	-0.2%	2.3%	4.5%	3.2%	1.8%	1.2%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	8.7%	12.0%
Hydro	1	2	3	2	3	4	4	3.7%	3.9%	-1.4%	1.9%	1.5%	1.5%
Other renewables	0	0	0	0	0	1	3	n.s.	19.8%	30.1%	15.7%	9.7%	8.2%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	32	24	31	31	33	36	36	-2.9%	2.8%	-0.1%	0.5%	0.9%	0.0%
Energy for Power Generation	15	14	16	16	17	19	19	-0.6%	1.6%	0.1%	0.5%	1.0%	0.2%
Other Energy Transformation & Losses	1	1	2	2	3	3	4	-2.8%	6.5%	-1.8%	4.1%	2.6%	0.3%
Final consumption	21	13	19	19	21	23	24	-4.4%	3.6%	0.2%	0.6%	1.1%	0.5%
Steel, Non-Met. Minerals and Chem.	0	1	3	2	2	2	2	5.0%	14.4%	-1.5%	-1.6%	-1.3%	-0.5%
Other Industry	7	3	2	2	3	4	4	-8.3%	-3.5%	1.9%	1.7%	2.1%	1.1%
Non-Energy Use	2	0	1	1	1	1	1	-13.4%	10.4%	-1.8%	0.7%	1.2%	0.1%
Residential	4	5	6	6	7	8	8	1.0%	1.7%	1.2%	0.8%	0.9%	0.2%
Services	4	2	2	2	2	3	3	-9.8%	2.7%	-0.9%	1.5%	2.3%	1.3%
Agriculture	0	0	0	0	0	0	1	11.2%	-3.1%	3.7%	1.0%	1.2%	1.0%
Road	3	2	5	5	5	5	5	-1.1%	6.9%	0.1%	0.4%	0.9%	0.3%
Rail	0	0	0	0	0	0	0	2.1%	18.1%	-4.6%	0.8%	1.0%	0.6%
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other Transport	0	0	0	0	0	0	0	n.s.	4.8%	3.8%	1.7%	1.6%	0.5%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Other Balkans	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>13</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>14</b>	<b>13</b>	<b>-1.1%</b>	<b>1.1%</b>	<b>0.4%</b>	<b>0.0%</b>	<b>0.4%</b>	<b>-1.2%</b>
Coal	12	11	13	13	11	10	8	-0.4%	1.1%	-0.1%	-1.7%	-0.8%	-2.0%
Oil	1	0	0	0	1	1	1	-12.5%	-2.9%	-9.4%	20.5%	4.3%	-2.8%
Gas	0	0	0	1	2	2	2	-7.4%	7.7%	9.4%	11.0%	4.1%	-0.3%
Biomass & Waste	0	0	0	0	1	1	2	n.s.	n.s.	n.s.	10.1%	3.3%	2.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>65</b>	<b>59</b>	<b>79</b>	<b>86</b>	<b>100</b>	<b>120</b>	<b>134</b>	<b>-0.9%</b>	<b>3.0%</b>	<b>0.8%</b>	<b>1.5%</b>	<b>1.9%</b>	<b>1.1%</b>
Coal	44	35	45	51	48	49	41	-2.3%	2.6%	1.3%	-0.7%	0.3%	-1.9%
of which CCS	0	0	0	0	0	0	5	n.s.	n.s.	n.s.	n.s.	23.2%	35.9%
Oil	3	1	0	0	2	3	3	-11.9%	-12.4%	3.3%	20.5%	4.3%	-2.7%
Gas	1	0	0	3	8	12	12	-11.4%	0.3%	21.3%	10.5%	4.4%	0.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	21.9%
Biomass & Waste	0	0	0	1	4	6	8	n.s.	n.s.	n.s.	10.4%	3.6%	3.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	16	23	34	29	35	41	47	3.7%	3.9%	-1.4%	1.9%	1.5%	1.5%
Wind	0	0	0	0	2	6	15	n.s.	n.s.	n.s.	17.5%	11.8%	9.2%
Solar	0	0	0	0	1	3	9	n.s.	n.s.	n.s.	20.7%	12.5%	10.3%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	19.6%	15.4%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>32</b>	<b>13</b>	<b>14</b>	<b>20</b>	<b>23</b>	<b>28</b>	<b>38</b>	<b>-8.7%</b>	<b>0.6%</b>	<b>4.1%</b>	<b>1.2%</b>	<b>2.1%</b>	<b>3.0%</b>
Coal	27	8	8	12	11	11	11	-11.3%	0.3%	3.3%	-0.9%	-0.1%	0.1%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	23.6%	36.4%
Oil	3	1	1	1	1	1	1	-16.3%	1.7%	5.2%	-0.4%	0.5%	1.4%
Gas	1	0	0	1	2	3	3	-17.7%	2.2%	18.6%	4.4%	3.0%	0.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	22.1%
Biomass & Waste	0	0	0	0	1	1	1	n.s.	n.s.	n.s.	6.3%	0.7%	3.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	4	4	5	7	8	9	n.s.	0.9%	2.5%	1.9%	1.5%	1.5%
Wind	0	0	0	0	1	3	6	n.s.	n.s.	n.s.	17.2%	11.7%	9.0%
Solar	0	0	0	0	1	3	7	n.s.	n.s.	n.s.	20.6%	12.4%	10.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	19.1%	14.8%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>21</b>	<b>13</b>	<b>19</b>	<b>19</b>	<b>21</b>	<b>23</b>	<b>24</b>	<b>-4.4%</b>	<b>3.6%</b>	<b>0.2%</b>	<b>0.6%</b>	<b>1.1%</b>	<b>0.5%</b>
Coal	4	2	2	2	1	1	1	-7.1%	1.2%	-1.7%	-1.1%	-0.8%	0.0%
Oil	8	4	8	7	7	6	6	-6.1%	6.3%	-0.6%	-0.9%	-0.3%	-0.9%
Gas	3	1	1	1	2	2	2	-7.6%	0.0%	0.3%	2.9%	2.4%	0.4%
Electricity	4	4	5	5	6	8	9	-0.8%	2.5%	0.8%	1.6%	2.0%	1.2%
Heat	1	1	1	1	1	2	2	-1.9%	5.2%	0.2%	2.4%	1.8%	1.2%
Biomass & Other	2	2	2	3	3	4	4	-0.2%	2.2%	3.0%	1.4%	1.4%	0.9%
Share of Renewables <sup>3</sup> (%)	15%	26%	26%	28%	34%	39%	48%	5.2%	0.2%	0.6%	2.0%	1.4%	2.2%
<b>Industry (incl. non-energy use)</b>	<b>9</b>	<b>4</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>-7.9%</b>	<b>3.7%</b>	<b>-0.2%</b>	<b>0.4%</b>	<b>0.9%</b>	<b>0.5%</b>
Coal	1	1	1	1	1	1	1	-2.4%	1.3%	-0.5%	-0.4%	-0.1%	0.8%
Oil	4	1	2	2	2	1	1	-15.1%	7.7%	-0.8%	-0.7%	-0.4%	-1.7%
Gas	1	1	1	1	1	1	1	-2.4%	-0.6%	-1.1%	0.8%	1.9%	0.3%
Electricity	2	1	1	2	2	2	3	-7.8%	5.3%	1.1%	1.5%	1.8%	1.2%
Heat	0	0	0	0	0	0	0	-6.1%	9.0%	-2.6%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	0	0	0	0	0	0	n.s.	-3.4%	6.7%	2.1%	4.9%	4.6%
<b>Buildings</b>	<b>9</b>	<b>6</b>	<b>8</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>-3.1%</b>	<b>2.0%</b>	<b>0.7%</b>	<b>0.9%</b>	<b>1.3%</b>	<b>0.5%</b>
Coal	2	1	1	0	0	0	0	-12.7%	2.2%	-4.6%	-3.5%	-4.2%	-6.4%
Oil	1	1	1	0	0	0	0	-1.0%	1.1%	-2.9%	-2.7%	-1.7%	-2.2%
Gas	2	0	0	0	1	1	1	-14.8%	1.1%	2.5%	3.3%	2.0%	-0.7%
Electricity	2	3	3	4	4	5	5	3.1%	1.5%	0.5%	1.1%	1.7%	1.0%
Heat	0	0	1	1	1	1	2	0.0%	3.7%	1.5%	3.2%	2.3%	1.5%
Biomass & Other	2	2	2	3	3	3	3	-1.2%	2.8%	2.5%	0.7%	0.8%	0.1%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>11.2%</b>	<b>-3.1%</b>	<b>3.7%</b>	<b>1.0%</b>	<b>1.2%</b>	<b>1.0%</b>
Coal	0	0	0	0	0	0	0	2.3%	-29.6%	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	16.2%	-2.0%	4.8%	0.8%	0.8%	-0.1%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	1.0%	0.6%	0.7%	0.0%
Electricity	0	0	0	0	0	0	0	5.0%	6.0%	-0.8%	2.1%	2.5%	2.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	-13.5%	10.6%	0.9%	1.7%	4.0%
<b>Transport</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>-1.0%</b>	<b>7.3%</b>	<b>-0.1%</b>	<b>0.4%</b>	<b>0.9%</b>	<b>0.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	2	5	5	4	4	4	-0.9%	7.3%	-0.4%	-1.0%	-0.2%	-0.6%
Gas	0	0	0	0	0	0	1	n.s.	n.s.	18.6%	19.0%	5.4%	2.5%
Electricity	0	0	0	0	0	1	1	-5.5%	3.9%	8.7%	15.5%	5.5%	2.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	15.2%	4.9%	2.9%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>-2.8%</b>	<b>6.5%</b>	<b>-1.8%</b>	<b>4.1%</b>	<b>2.6%</b>	<b>0.3%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Russia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	148	146	143	143	139	133	129	-0.1%	-0.2%	0.0%	-0.3%	-0.4%	-0.3%
GDP per capita (ppp, k\$'05)	13	9	14	16	20	24	25	-3.8%	5.1%	1.1%	2.4%	1.8%	0.4%
GDP per capita (mer, k\$'05)	6	4	6	7	9	10	11	-3.8%	5.1%	0.9%	2.4%	1.8%	0.4%
Share Value Added - Agriculture (%)	17	6	4	4	4	3	3	-9.0%	-5.0%	-0.1%	-0.7%	-0.4%	-0.1%
Share Value Added - Industry (%)	48	38	35	35	33	32	32	-2.4%	-0.9%	0.0%	-0.4%	-0.4%	-0.1%
Share Value Added - Services (%)	35	56	61	62	63	64	65	4.7%	1.0%	0.0%	0.2%	0.2%	0.0%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	13	15	18	-6.5%	7.4%	-4.3%	0.9%	1.5%	1.4%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	18	21	30	38	51	65	84	1.4%	3.8%	2.3%	3.0%	2.6%	2.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	3 486	1 702	1 699	1 689	2 050	2 061	1 815	-6.9%	0.0%	-0.1%	2.0%	0.1%	-1.3%
Total GHG (excl. sinks)	3 486	2 161	2 318	2 124	2 282	2 151	1 900	-4.7%	0.7%	-0.9%	0.7%	-0.6%	-1.2%
Total GHG (energy, industry, agriculture)	3 359	2 145	2 305	2 118	2 282	2 151	1 816	-4.4%	0.7%	-0.8%	0.7%	-0.6%	-1.7%
CO <sub>2</sub>	2 476	1 550	1 650	1 487	1 611	1 664	1 386	-4.6%	0.6%	-1.0%	0.8%	0.3%	-1.8%
CH <sub>4</sub>	593	435	491	451	478	301	252	-3.1%	1.2%	-0.8%	0.6%	-4.5%	-1.7%
N <sub>2</sub> O	248	131	150	160	170	174	167	-6.2%	1.3%	0.6%	0.6%	0.2%	-0.4%
F gases	41	29	14	20	24	12	11	-3.5%	-6.8%	3.6%	1.5%	-6.6%	-1.2%
Total GHG from Energy and Industry	3 036	1 992	2 164	1 964	2 115	1 977	1 642	-4.1%	0.8%	-1.0%	0.7%	-0.7%	-1.8%
CO <sub>2</sub> Emissions from Fuel Comb.	2 343	1 474	1 545	1 389	1 511	1 564	1 298	-4.5%	0.5%	-1.1%	0.8%	0.3%	-1.8%
Power generation/District heating	795	586	623	514	560	554	420	-3.0%	0.6%	-1.9%	0.9%	-0.1%	-2.7%
Industry	272	196	214	216	249	278	262	-3.2%	0.9%	0.1%	1.4%	1.1%	-0.6%
Buildings	336	170	137	99	98	103	80	-6.6%	-2.1%	-3.2%	-0.1%	0.4%	-2.5%
Agriculture	49	21	14	13	15	15	14	-8.3%	-4.1%	-0.1%	0.8%	0.4%	-0.8%
Transport	252	112	157	187	196	197	171	-7.8%	3.4%	1.8%	0.5%	0.0%	-1.4%
Other	640	389	400	360	393	417	351	-4.9%	0.3%	-1.1%	0.9%	0.6%	-1.7%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	2	55	n.s.	n.s.	n.s.	3.2%	43.0%	36.8%
Coal	0	0	0	0	0	1	43	n.s.	n.s.	n.s.	3.2%	46.6%	40.9%
Gas	0	0	0	0	0	1	13	n.s.	n.s.	n.s.	3.1%	52.5%	28.9%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	3.2%	5.5%	10.1%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	1 232	952	1 237	1 247	1 474	1 739	1 953	-2.5%	2.7%	0.1%	1.7%	1.7%	1.2%
Coal	177	138	174	200	294	436	597	-2.5%	2.4%	1.4%	3.9%	4.0%	3.2%
Oil	510	325	511	500	491	441	354	-4.4%	4.6%	-0.2%	-0.2%	-1.1%	-2.2%
Natural gas	491	436	488	470	597	755	886	-1.2%	1.1%	-0.4%	2.4%	2.4%	1.6%
Biomass	8	5	4	12	25	32	41	-5.5%	-0.9%	11.1%	7.6%	2.3%	2.5%
Nuclear <sup>1</sup>	31	35	45	48	47	50	43	1.0%	2.7%	0.6%	-0.1%	0.6%	-1.6%
Hydro	14	14	14	16	17	18	19	0.0%	0.2%	0.9%	0.4%	0.7%	0.9%
Other renewables	0	0	0	1	2	7	13	7.6%	24.2%	10.0%	8.0%	10.5%	7.4%
Net Imports	- 338	- 322	- 528	- 602	- 765	- 978	- 1 255						
Coal	18	- 5	- 51	- 57	- 105	- 228	- 415						
Oil	- 252	- 199	- 371	- 345	- 337	- 292	- 231						
Natural gas	- 103	- 117	- 104	- 194	- 312	- 447	- 599						
Biomass	0	0	0	- 5	- 8	- 6	- 5						
Biofuels	0	0	0	- 1	- 2	- 3	- 4						
Electricity	- 1	- 1	- 2	- 1	- 1	- 1	- 1						
Primary Energy Demand <sup>2</sup>	894	630	710	645	709	761	698	-3.4%	1.2%	-0.9%	0.9%	0.7%	-0.9%
Coal	195	133	123	143	189	208	181	-3.8%	-0.7%	1.5%	2.8%	0.9%	-1.4%
Oil	258	126	140	155	154	148	123	-6.9%	1.1%	1.0%	0.0%	-0.4%	-1.8%
Natural gas	388	319	384	276	285	308	287	-1.9%	1.9%	-3.2%	0.3%	0.8%	-0.7%
Biomass	8	5	4	8	17	26	36	-5.5%	-0.9%	5.7%	8.6%	4.3%	3.3%
Nuclear <sup>1</sup>	31	35	45	48	47	50	43	1.0%	2.7%	0.6%	-0.1%	0.6%	-1.6%
Hydro	14	14	14	16	17	18	19	0.0%	0.2%	0.9%	0.4%	0.7%	0.9%
Other renewables	0	0	0	1	2	7	13	7.6%	24.2%	10.0%	8.0%	10.5%	7.4%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	894	630	710	645	709	761	698	-3.4%	1.2%	-0.9%	0.9%	0.7%	-0.9%
Energy for Power Generation	325	252	286	241	252	261	234	-2.5%	1.2%	-1.7%	0.5%	0.4%	-1.1%
Other Energy Transformation & Losses	237	165	174	155	174	190	178	-3.6%	0.5%	-1.1%	1.2%	0.9%	-0.7%
Final consumption	603	400	425	414	455	491	466	-4.0%	0.6%	-0.3%	0.9%	0.8%	-0.5%
Steel, Non-Met. Minerals and Chem.	102	78	91	93	117	139	141	-2.7%	1.6%	0.1%	2.3%	1.8%	0.2%
Other Industry	128	65	52	53	53	53	50	-6.5%	-2.2%	0.1%	0.1%	0.0%	-0.7%
Non-Energy Use	40	36	66	67	72	74	67	-1.0%	6.2%	0.1%	0.7%	0.3%	-1.0%
Residential	168	140	111	96	94	97	89	-1.8%	-2.3%	-1.5%	-0.2%	0.2%	-0.9%
Services	62	25	37	33	39	44	41	-8.7%	3.9%	-1.1%	1.8%	1.1%	-0.8%
Agriculture	22	9	6	6	7	7	7	-8.3%	-4.4%	0.0%	1.0%	0.8%	0.4%
Road	52	34	48	52	56	60	56	-4.1%	3.4%	0.7%	0.9%	0.5%	-0.7%
Rail	12	5	7	7	7	7	7	-7.6%	2.1%	0.5%	0.3%	0.0%	-0.6%
Aviation	9	5	5	6	7	8	7	-6.9%	1.5%	1.4%	1.6%	0.9%	-0.8%
Other Transport	7	1	1	2	2	2	2	-14.7%	-1.4%	6.2%	1.0%	-0.1%	-1.6%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Russia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>279</b>	<b>204</b>	<b>226</b>	<b>176</b>	<b>186</b>	<b>187</b>	<b>159</b>	<b>-3.1%</b>	<b>1.0%</b>	<b>-2.5%</b>	<b>0.6%</b>	<b>0.1%</b>	<b>-1.6%</b>
Coal	63	63	59	65	80	78	56	0.0%	-0.6%	1.0%	2.1%	-0.2%	-3.4%
Oil	46	12	4	1	3	3	2	-12.6%	-10.2%	-10.5%	7.7%	-0.6%	-5.1%
Gas	170	127	160	107	99	100	93	-2.9%	2.4%	-4.0%	-0.7%	0.1%	-0.8%
Biomass & Waste	0	2	2	3	4	6	8	29.4%	1.7%	2.8%	4.8%	3.7%	3.8%
Other	0	0	0	0	0	0	0	7.6%	24.2%	8.3%	4.0%	0.6%	2.6%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>1 082</b>	<b>878</b>	<b>1 038</b>	<b>988</b>	<b>1 141</b>	<b>1 275</b>	<b>1 243</b>	<b>-2.1%</b>	<b>1.7%</b>	<b>-0.5%</b>	<b>1.4%</b>	<b>1.1%</b>	<b>-0.3%</b>
Coal	157	176	166	224	310	326	244	1.1%	-0.6%	3.0%	3.3%	0.5%	-2.9%
of which CCS	0	0	0	0	0	1	28	n.s.	n.s.	n.s.	n.s.	n.s.	42.0%
Oil	129	33	9	6	12	11	7	-12.7%	-11.9%	-4.6%	7.6%	-0.6%	-4.9%
Gas	512	370	521	385	422	476	469	-3.2%	3.5%	-3.0%	0.9%	1.2%	-0.1%
of which CCS	0	0	0	0	0	1	16	n.s.	n.s.	n.s.	n.s.	n.s.	31.6%
Biomass & Waste	0	3	3	5	14	23	38	52.6%	0.9%	6.7%	9.9%	5.4%	5.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	118	131	170	181	178	194	170	1.0%	2.7%	0.6%	-0.1%	0.9%	-1.3%
Hydro	166	165	168	185	192	205	225	0.0%	0.2%	0.9%	0.4%	0.7%	0.9%
Wind	0	0	0	2	9	29	63	n.s.	25.7%	55.9%	18.2%	12.7%	8.0%
Solar	0	0	0	0	2	8	24	n.s.	n.s.	n.s.	24.5%	15.5%	12.0%
Other	0	0	1	1	2	2	3	7.6%	24.2%	8.3%	4.3%	1.8%	4.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>254</b>	<b>211</b>	<b>231</b>	<b>226</b>	<b>230</b>	<b>270</b>	<b>308</b>	<b>-1.9%</b>	<b>0.9%</b>	<b>-0.2%</b>	<b>0.2%</b>	<b>1.6%</b>	<b>1.3%</b>
Coal	42	42	42	42	53	64	65	0.0%	0.0%	-0.1%	2.4%	2.0%	0.1%
of which CCS	0	0	0	0	0	0	4	n.s.	n.s.	n.s.	n.s.	n.s.	42.5%
Oil	121	16	16	18	14	12	12	-18.3%	0.0%	1.3%	-2.4%	-1.4%	-0.5%
Gas	91	88	104	90	81	92	100	-0.3%	1.7%	-1.4%	-1.0%	1.3%	0.8%
of which CCS	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	n.s.	32.3%
Biomass & Waste	0	1	1	1	2	3	6	36.8%	0.0%	2.7%	9.2%	5.7%	5.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	20	23	24	24	25	22	n.s.	1.3%	0.7%	-0.3%	0.7%	-1.5%
Hydro	0	44	45	49	51	55	60	n.s.	0.2%	0.9%	0.4%	0.7%	0.9%
Wind	0	0	0	1	4	12	25	n.s.	19.6%	54.6%	18.0%	12.5%	7.8%
Solar	0	0	0	0	1	6	18	n.s.	n.s.	n.s.	24.6%	15.3%	12.1%
Other	0	0	0	0	0	0	0	n.s.	14.6%	6.8%	4.1%	1.4%	3.8%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>603</b>	<b>400</b>	<b>425</b>	<b>414</b>	<b>455</b>	<b>491</b>	<b>466</b>	<b>-4.0%</b>	<b>0.6%</b>	<b>-0.3%</b>	<b>0.9%</b>	<b>0.8%</b>	<b>-0.5%</b>
Coal	68	29	28	34	52	66	65	-8.3%	-0.2%	1.9%	4.2%	2.4%	-0.1%
Oil	145	91	109	119	119	115	98	-4.6%	1.9%	0.9%	-0.1%	-0.3%	-1.6%
Gas	110	90	110	91	104	117	109	-2.0%	2.0%	-1.9%	1.3%	1.3%	-0.8%
Electricity	68	50	60	58	67	75	74	-2.9%	1.8%	-0.4%	1.5%	1.2%	-0.2%
Heat	203	137	115	107	104	103	102	-3.9%	-1.8%	-0.7%	-0.2%	-0.1%	-0.1%
Biomass & Other	8	3	2	5	10	14	19	-9.3%	-2.5%	8.2%	6.9%	3.3%	2.9%
Share of Renewables <sup>3</sup> (%)	6%	8%	7%	8%	9%	10%	15%	2.1%	-0.9%	1.3%	1.2%	1.6%	3.4%
<b>Industry (incl. non-energy use)</b>	<b>270</b>	<b>179</b>	<b>210</b>	<b>212</b>	<b>242</b>	<b>266</b>	<b>257</b>	<b>-4.0%</b>	<b>1.6%</b>	<b>0.1%</b>	<b>1.3%</b>	<b>1.0%</b>	<b>-0.3%</b>
Coal	28	19	24	32	50	64	64	-3.9%	2.6%	2.7%	4.6%	2.6%	0.0%
Oil	44	36	43	47	46	45	39	-2.0%	1.9%	0.9%	-0.1%	-0.3%	-1.3%
Gas	52	43	66	63	71	78	74	-1.9%	4.5%	-0.5%	1.1%	1.1%	-0.6%
Electricity	41	27	28	26	30	34	34	-4.2%	0.5%	-0.7%	1.4%	1.2%	0.0%
Heat	105	55	48	44	42	41	39	-6.4%	-1.4%	-0.9%	-0.3%	-0.4%	-0.4%
Biomass & Other	0	1	0	1	3	4	7	n.s.	-2.9%	9.8%	10.1%	3.6%	5.5%
<b>Buildings</b>	<b>231</b>	<b>166</b>	<b>148</b>	<b>129</b>	<b>134</b>	<b>141</b>	<b>129</b>	<b>-3.3%</b>	<b>-1.1%</b>	<b>-1.4%</b>	<b>0.3%</b>	<b>0.5%</b>	<b>-0.9%</b>
Coal	40	10	4	2	2	1	1	-13.1%	-8.8%	-4.6%	-2.3%	-3.3%	-5.9%
Oil	14	7	6	8	6	5	4	-7.0%	-0.6%	2.6%	-2.8%	-2.1%	-3.5%
Gas	57	47	43	27	30	35	28	-1.9%	-0.8%	-4.6%	1.1%	1.4%	-2.1%
Electricity	15	18	26	25	28	31	28	1.7%	3.8%	-0.3%	1.2%	0.9%	-0.9%
Heat	98	82	67	63	62	63	63	-1.7%	-2.0%	-0.6%	-0.2%	0.1%	0.0%
Biomass & Other	7	2	2	4	5	7	6	-10.8%	-2.6%	7.6%	4.0%	1.8%	0.0%
<b>Agriculture</b>	<b>22</b>	<b>9</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>-8.3%</b>	<b>-4.4%</b>	<b>0.0%</b>	<b>1.0%</b>	<b>0.8%</b>	<b>0.4%</b>
Coal	1	0	0	0	0	0	0	-7.1%	-11.5%	-3.8%	0.0%	-0.4%	-1.5%
Oil	14	6	4	4	4	4	4	-8.7%	-4.2%	-0.1%	0.9%	0.4%	-0.8%
Gas	1	1	1	1	1	1	1	-0.8%	0.9%	0.5%	0.7%	0.3%	-0.7%
Electricity	6	3	1	1	2	2	2	-7.7%	-6.2%	0.1%	1.7%	1.6%	1.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	0	0	0	0	0	1	-15.8%	1.1%	0.0%	0.0%	4.2%	9.4%
<b>Transport</b>	<b>80</b>	<b>46</b>	<b>61</b>	<b>67</b>	<b>73</b>	<b>77</b>	<b>71</b>	<b>-5.4%</b>	<b>3.0%</b>	<b>0.9%</b>	<b>0.9%</b>	<b>0.5%</b>	<b>-0.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	73	42	56	61	62	61	51	-5.3%	2.8%	0.8%	0.3%	-0.1%	-1.7%
Gas	1	0	0	0	2	4	6	-23.1%	3.4%	10.6%	20.6%	6.1%	4.7%
Electricity	6	3	5	6	7	9	10	-5.5%	4.5%	0.8%	2.8%	2.0%	1.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	2	3	4	n.s.	n.s.	n.s.	19.3%	6.8%	3.4%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>237</b>	<b>165</b>	<b>174</b>	<b>155</b>	<b>174</b>	<b>190</b>	<b>178</b>	<b>-3.6%</b>	<b>0.5%</b>	<b>-1.1%</b>	<b>1.2%</b>	<b>0.9%</b>	<b>-0.7%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Ukraine	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	51	49	46	44	41	38	35	-0.5%	-0.7%	-0.4%	-0.7%	-0.8%	-0.7%
GDP per capita (ppp, k\$'05)	8	4	6	7	10	15	21	-7.5%	5.0%	1.0%	4.1%	3.9%	3.5%
GDP per capita (mer, k\$'05)	3	1	2	2	3	5	7	-7.5%	5.0%	0.7%	4.1%	3.9%	3.5%
Share Value Added - Agriculture (%)	26	17	8	9	7	6	5	-4.0%	-7.0%	0.8%	-2.5%	-1.6%	-1.0%
Share Value Added - Industry (%)	45	36	31	27	27	26	24	-2.0%	-1.5%	-1.4%	-0.2%	-0.4%	-0.5%
Share Value Added - Services (%)	30	47	60	64	66	68	70	4.6%	2.6%	0.6%	0.4%	0.3%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	13	15	18	-6.5%	7.4%	-4.3%	0.9%	1.5%	1.4%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	18	21	30	38	51	65	84	1.4%	3.8%	2.3%	3.0%	2.6%	2.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	837	358	330	271	371	520	562	-8.1%	-0.8%	-2.0%	3.2%	3.5%	0.8%
Total GHG (excl. sinks)	907	409	368	296	392	540	581	-7.7%	-1.1%	-2.1%	2.8%	3.2%	0.7%
Total GHG (energy, industry, agriculture)	907	409	368	296	392	540	581	-7.7%	-1.1%	-2.1%	2.8%	3.2%	0.7%
CO <sub>2</sub>	685	290	272	210	303	466	516	-8.2%	-0.6%	-2.6%	3.7%	4.4%	1.0%
CH <sub>4</sub>	162	93	66	54	54	39	32	-5.4%	-3.3%	-2.1%	0.1%	-3.2%	-2.0%
N <sub>2</sub> O	59	26	29	32	35	35	33	-7.7%	0.9%	1.0%	0.8%	-0.1%	-0.4%
F gases	0	0	1	1	1	0	0	-5.6%	17.0%	1.3%	1.5%	-8.8%	0.4%
Total GHG from Energy and Industry	803	372	334	259	352	499	541	-7.4%	-1.1%	-2.5%	3.1%	3.6%	0.8%
CO <sub>2</sub> Emissions from Fuel Comb.	647	271	253	192	280	432	478	-8.3%	-0.7%	-2.7%	3.8%	4.4%	1.0%
Power generation/District heating	216	79	94	73	114	136	129	-9.6%	1.8%	-2.6%	4.6%	1.8%	-0.5%
Industry	133	48	41	35	71	175	222	-9.6%	-1.5%	-1.7%	7.2%	9.5%	2.4%
Buildings	60	44	37	25	22	20	17	-3.0%	-1.8%	-3.6%	-1.3%	-1.2%	-1.4%
Agriculture	23	3	4	4	5	5	5	-17.2%	2.4%	-0.4%	1.0%	0.8%	0.0%
Transport	53	17	30	26	27	28	27	-10.6%	5.5%	-1.4%	0.4%	0.4%	-0.5%
Other	161	78	47	29	42	68	79	-7.0%	-5.1%	-4.5%	3.6%	5.0%	1.5%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	1	17	n.s.	n.s.	n.s.	6.0%	n.s.	36.4%
Coal	0	0	0	0	0	1	17	n.s.	n.s.	n.s.	6.1%	n.s.	37.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	41.7%	27.0%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	5.6%	20.0%	11.0%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	109	73	80	82	97	130	124	-3.9%	0.9%	0.2%	1.7%	3.0%	-0.5%
Coal	62	34	35	36	44	53	38	-5.7%	0.3%	0.2%	1.9%	2.0%	-3.3%
Oil	5	4	4	4	4	3	2	-3.4%	-0.4%	0.6%	-0.3%	-1.3%	-3.0%
Natural gas	21	13	15	15	16	18	19	-4.5%	1.4%	-0.1%	0.5%	1.2%	0.6%
Biomass	0	0	1	1	2	2	3	-2.2%	18.6%	-0.7%	2.0%	3.4%	2.7%
Nuclear <sup>1</sup>	20	20	24	23	29	48	53	0.2%	1.4%	-0.1%	2.3%	5.1%	1.0%
Hydro	1	1	1	1	1	1	1	0.7%	1.4%	0.1%	0.9%	0.2%	0.4%
Other renewables	0	0	0	1	1	4	7	n.s.	n.s.	43.4%	6.8%	11.3%	6.2%
Net Imports	157	61	58	20	61	164	227						
Coal	27	4	9	3	39	138	198						
Oil	62	8	10	7	9	12	14						
Natural gas	71	49	40	11	13	15	15						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	-2	0	0	-1	-1	-1	-1						
Primary Energy Demand <sup>2</sup>	266	134	138	102	158	294	351	-6.6%	0.3%	-3.0%	4.5%	6.4%	1.8%
Coal	88	39	44	39	83	191	236	-7.9%	1.4%	-1.2%	7.7%	8.7%	2.1%
Oil	67	12	13	11	13	15	16	-15.8%	1.0%	-2.0%	1.7%	1.8%	0.6%
Natural gas	92	62	55	26	29	33	34	-3.8%	-1.2%	-7.2%	1.2%	1.1%	0.5%
Biomass	0	0	1	1	2	2	3	-2.2%	18.4%	-0.5%	2.6%	3.2%	3.0%
Nuclear <sup>1</sup>	20	20	24	23	29	48	53	0.2%	1.4%	-0.1%	2.3%	5.1%	1.0%
Hydro	1	1	1	1	1	1	1	0.7%	1.4%	0.1%	0.9%	0.2%	0.4%
Other renewables	0	0	0	1	1	4	7	n.s.	n.s.	43.4%	6.8%	11.3%	6.2%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	266	134	138	102	158	294	351	-6.6%	0.3%	-3.0%	4.5%	6.4%	1.8%
Energy for Power Generation	83	45	51	46	64	92	103	-6.0%	1.4%	-1.1%	3.5%	3.7%	1.2%
Other Energy Transformation & Losses	68	37	34	14	23	45	51	-5.9%	-0.8%	-8.7%	5.4%	6.7%	1.3%
Final consumption	163	75	77	64	98	196	240	-7.4%	0.2%	-1.8%	4.4%	7.1%	2.1%
Steel, Non-Met. Minerals and Chem.	29	14	24	21	52	149	193	-6.9%	5.2%	-1.1%	9.4%	11.0%	2.6%
Other Industry	61	24	8	6	6	5	5	-8.8%	-10.4%	-2.7%	0.3%	-3.2%	0.0%
Non-Energy Use	6	1	6	4	5	5	6	-15.4%	16.5%	-3.8%	2.0%	1.7%	1.2%
Residential	32	24	24	19	18	17	16	-2.8%	-0.1%	-2.5%	-0.3%	-0.3%	-1.0%
Services	4	3	5	5	6	7	7	-3.3%	6.4%	-0.3%	2.5%	1.7%	0.7%
Agriculture	9	2	2	2	2	2	2	-16.6%	1.2%	0.0%	1.2%	1.2%	1.2%
Road	18	6	8	7	8	9	10	-9.6%	2.5%	-1.1%	1.1%	1.2%	0.5%
Rail	2	1	1	1	1	1	1	-6.9%	-0.5%	-1.1%	1.7%	1.5%	1.2%
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other Transport	1	0	0	0	0	0	0	n.s.	n.s.	-7.1%	2.4%	1.5%	1.0%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Ukraine	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>62</b>	<b>23</b>	<b>27</b>	<b>21</b>	<b>32</b>	<b>39</b>	<b>42</b>	<b>-9.3%</b>	<b>1.4%</b>	<b>-2.6%</b>	<b>4.6%</b>	<b>1.8%</b>	<b>0.8%</b>
Coal	37	15	20	15	23	27	28	-8.6%	2.9%	-2.8%	4.5%	1.8%	0.2%
Oil	13	0	0	1	1	2	3	-30.9%	0.3%	6.1%	9.5%	4.3%	1.5%
Gas	12	8	6	5	7	9	11	-4.2%	-2.5%	-2.4%	4.2%	1.4%	2.1%
Biomass & Waste	0	0	0	0	0	0	1	n.s.	n.s.	-6.4%	3.1%	2.6%	5.0%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>299</b>	<b>171</b>	<b>189</b>	<b>187</b>	<b>282</b>	<b>424</b>	<b>500</b>	<b>-5.4%</b>	<b>1.0%</b>	<b>-0.1%</b>	<b>4.2%</b>	<b>4.2%</b>	<b>1.7%</b>
Coal	114	52	70	57	102	131	137	-7.6%	3.0%	-2.0%	6.0%	2.6%	0.4%
of which CCS	0	0	0	0	0	0	22	n.s.	n.s.	n.s.	n.s.	n.s.	45.9%
Oil	48	1	1	3	6	10	12	-30.9%	-3.6%	12.0%	9.6%	4.5%	1.6%
Gas	50	30	16	18	31	43	56	-5.0%	-6.3%	1.1%	5.9%	3.2%	2.7%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	29.1%
Biomass & Waste	0	0	0	0	0	1	3	n.s.	n.s.	2.5%	3.7%	13.2%	8.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	76	77	89	89	114	192	215	0.2%	1.4%	-0.1%	2.5%	5.4%	1.1%
Hydro	11	11	13	13	14	15	15	0.7%	1.4%	0.1%	0.9%	0.2%	0.4%
Wind	0	0	0	5	9	23	44	n.s.	42.9%	37.3%	5.5%	10.3%	6.7%
Solar	0	0	0	3	6	9	18	n.s.	n.s.	n.s.	6.4%	4.1%	7.8%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	12.5%	15.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>80</b>	<b>52</b>	<b>54</b>	<b>41</b>	<b>57</b>	<b>88</b>	<b>111</b>	<b>-4.1%</b>	<b>0.3%</b>	<b>-2.6%</b>	<b>3.3%</b>	<b>4.4%</b>	<b>2.4%</b>
Coal	22	22	22	9	17	25	28	-0.1%	0.0%	-8.1%	5.7%	4.4%	0.9%
of which CCS	0	0	0	0	0	0	3	n.s.	n.s.	n.s.	n.s.	n.s.	46.0%
Oil	45	1	1	1	1	2	2	-32.0%	0.0%	-5.9%	8.2%	5.9%	1.5%
Gas	12	14	12	8	9	10	12	1.2%	-1.0%	-4.2%	0.8%	1.9%	1.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	29.3%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	1.9%	-0.7%	11.3%	7.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	11	13	13	16	27	30	n.s.	1.6%	-0.1%	2.3%	5.2%	0.9%
Hydro	0	5	5	6	6	6	7	n.s.	1.5%	0.4%	0.8%	0.2%	0.4%
Wind	0	0	0	2	4	9	18	n.s.	n.s.	35.9%	5.5%	10.1%	6.5%
Solar	0	0	0	3	5	7	15	n.s.	n.s.	n.s.	6.3%	3.9%	7.7%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	12.0%	15.0%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>163</b>	<b>75</b>	<b>77</b>	<b>64</b>	<b>98</b>	<b>196</b>	<b>240</b>	<b>-7.4%</b>	<b>0.2%</b>	<b>-1.8%</b>	<b>4.4%</b>	<b>7.1%</b>	<b>2.1%</b>
Coal	39	16	15	15	42	126	165	-8.5%	-0.9%	0.5%	10.6%	11.6%	2.7%
Oil	43	11	12	11	12	14	14	-13.0%	1.5%	-1.4%	1.1%	1.3%	0.3%
Gas	33	26	25	15	15	17	16	-2.6%	-0.2%	-4.9%	0.0%	1.0%	-0.6%
Electricity	18	10	11	11	17	26	31	-5.8%	1.7%	0.0%	4.4%	4.2%	1.7%
Heat	31	13	12	10	10	11	12	-8.0%	-0.6%	-2.0%	0.1%	0.9%	0.3%
Biomass & Other	0	0	1	1	2	2	3	-2.2%	14.7%	4.1%	1.3%	2.5%	2.8%
Share of Renewables <sup>3</sup> (%)	2%	3%	4%	6%	5%	4%	5%	2.9%	4.7%	3.1%	-1.8%	-1.7%	2.1%
<b>Industry (incl. non-energy use)</b>	<b>97</b>	<b>40</b>	<b>37</b>	<b>31</b>	<b>63</b>	<b>159</b>	<b>204</b>	<b>-8.5%</b>	<b>-0.6%</b>	<b>-1.8%</b>	<b>7.3%</b>	<b>9.6%</b>	<b>2.5%</b>
Coal	30	13	14	15	41	125	164	-7.8%	0.5%	0.5%	11.0%	11.7%	2.8%
Oil	15	2	2	2	2	4	5	-16.8%	-0.4%	-2.9%	3.1%	4.5%	2.6%
Gas	23	12	11	6	7	9	9	-6.5%	-1.2%	-6.1%	2.1%	2.9%	-0.5%
Electricity	13	5	6	5	8	16	21	-8.4%	0.9%	-1.4%	5.4%	6.8%	2.6%
Heat	16	7	5	4	4	4	4	-8.0%	-3.6%	-1.7%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	0	0	0	0	0	1	n.s.	n.s.	2.3%	10.4%	13.3%	7.0%
<b>Buildings</b>	<b>36</b>	<b>27</b>	<b>28</b>	<b>23</b>	<b>24</b>	<b>24</b>	<b>23</b>	<b>-2.9%</b>	<b>0.7%</b>	<b>-2.1%</b>	<b>0.3%</b>	<b>0.2%</b>	<b>-0.5%</b>
Coal	8	3	1	1	1	1	0	-9.9%	-13.3%	0.3%	-1.0%	-2.1%	-4.6%
Oil	2	0	0	0	1	1	1	-13.8%	-8.9%	7.1%	7.0%	2.5%	1.1%
Gas	10	14	14	9	8	7	6	3.2%	0.5%	-4.3%	-1.9%	-1.5%	-1.4%
Electricity	1	3	5	5	8	8	8	8.5%	3.7%	1.2%	3.4%	0.9%	-0.6%
Heat	14	6	8	6	6	7	8	-8.1%	2.1%	-2.2%	0.2%	1.6%	0.6%
Biomass & Other	0	0	1	1	1	1	1	-2.2%	14.0%	3.6%	-0.9%	-2.0%	-2.9%
<b>Agriculture</b>	<b>9</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>-16.6%</b>	<b>1.2%</b>	<b>0.0%</b>	<b>1.2%</b>	<b>1.2%</b>	<b>1.2%</b>
Coal	1	0	0	0	0	0	0	n.s.	n.s.	-3.9%	0.0%	-0.4%	-1.5%
Oil	6	1	1	1	1	1	1	-15.7%	1.5%	-0.4%	1.1%	0.9%	0.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	-0.1%	0.9%	0.7%	0.2%
Electricity	2	0	0	0	0	1	1	-15.9%	-4.2%	1.6%	1.9%	2.4%	3.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	2.3%	0.0%	5.6%	13.1%
<b>Transport</b>	<b>21</b>	<b>7</b>	<b>9</b>	<b>8</b>	<b>9</b>	<b>11</b>	<b>11</b>	<b>-9.9%</b>	<b>2.3%</b>	<b>-1.1%</b>	<b>1.2%</b>	<b>1.2%</b>	<b>0.6%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	-9.8%	0.0%	0.0%	0.0%
Oil	20	7	9	7	8	8	7	-10.3%	2.4%	-1.3%	0.2%	0.1%	-1.0%
Gas	0	0	0	0	0	1	1	n.s.	n.s.	0.8%	18.2%	7.1%	6.0%
Electricity	1	1	1	1	1	2	2	-4.7%	0.1%	0.3%	4.7%	3.6%	2.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	13.9%	7.6%	4.7%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>68</b>	<b>37</b>	<b>34</b>	<b>14</b>	<b>23</b>	<b>45</b>	<b>51</b>	<b>-5.9%</b>	<b>-0.8%</b>	<b>-8.7%</b>	<b>5.4%</b>	<b>6.7%</b>	<b>1.3%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Other CIS	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	77	81	88	98	105	110	114	0.5%	0.8%	1.1%	0.7%	0.5%	0.3%
GDP per capita (ppp, k\$'05)	5	3	6	10	15	21	27	-4.0%	7.5%	4.3%	4.5%	3.4%	2.4%
GDP per capita (mer, k\$'05)	2	1	2	4	6	8	10	-4.1%	7.4%	4.3%	4.5%	3.4%	2.4%
Share Value Added - Agriculture (%)	20	20	9	7	6	6	5	-0.4%	-7.5%	-2.0%	-1.8%	-0.9%	-0.5%
Share Value Added - Industry (%)	26	35	43	41	40	37	35	2.9%	2.1%	-0.5%	-0.4%	-0.6%	-0.5%
Share Value Added - Services (%)	53	45	48	51	54	57	59	-1.6%	0.6%	0.7%	0.6%	0.5%	0.4%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	13	15	18	-6.5%	7.4%	-4.3%	0.9%	1.5%	1.4%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	18	21	30	38	51	65	84	1.4%	3.8%	2.3%	3.0%	2.6%	2.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	941	556	750	958	1 000	1 032	1 053	-5.1%	3.0%	2.5%	0.4%	0.3%	0.2%
Total GHG (excl. sinks)	969	598	810	1 012	1 047	1 073	1 092	-4.7%	3.1%	2.3%	0.3%	0.2%	0.2%
Total GHG (energy, industry, agriculture)	969	596	800	1 002	1 039	1 066	1 085	-4.7%	3.0%	2.3%	0.4%	0.3%	0.2%
CO <sub>2</sub>	723	417	547	753	814	828	842	-5.4%	2.8%	3.3%	0.8%	0.2%	0.2%
CH <sub>4</sub>	174	133	193	184	159	168	173	-2.6%	3.8%	-0.5%	-1.4%	0.6%	0.3%
N <sub>2</sub> O	69	45	56	60	60	62	63	-4.2%	2.3%	0.6%	0.1%	0.3%	0.1%
F gases	3	1	3	5	5	6	8	-9.0%	10.0%	5.1%	0.9%	1.7%	2.0%
Total GHG from Energy and Industry	843	513	689	889	928	952	971	-4.9%	3.0%	2.6%	0.4%	0.3%	0.2%
CO <sub>2</sub> Emissions from Fuel Comb.	688	384	500	687	738	750	763	-5.7%	2.7%	3.2%	0.7%	0.2%	0.2%
Power generation/District heating	248	152	165	215	229	203	188	-4.8%	0.8%	2.7%	0.7%	-1.2%	-0.8%
Industry	140	58	88	158	178	174	164	-8.4%	4.2%	6.0%	1.2%	-0.2%	-0.6%
Buildings	159	83	104	127	120	136	160	-6.3%	2.3%	2.0%	-0.6%	1.2%	1.6%
Agriculture	13	8	8	9	9	8	7	-4.2%	-0.4%	1.9%	-0.3%	-1.5%	-1.8%
Transport	56	27	41	54	55	59	58	-6.9%	4.1%	2.8%	0.1%	0.6%	0.0%
Other	73	55	95	124	146	170	187	-2.7%	5.5%	2.7%	1.7%	1.6%	1.0%
CO <sub>2</sub> captured (CCS)	0	0	0	0	17	80	162	n.s.	n.s.	n.s.	n.s.	17.0%	7.2%
Coal	0	0	0	0	8	38	84	n.s.	n.s.	n.s.	n.s.	17.4%	8.3%
Gas	0	0	0	0	9	42	76	n.s.	n.s.	n.s.	n.s.	16.6%	6.0%
Biomass	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	5.8%	13.5%	25.2%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	224	200	316	421	568	679	746	-1.1%	4.7%	2.9%	3.0%	1.8%	0.9%
Coal	56	38	53	77	89	107	112	-3.8%	3.3%	3.8%	1.4%	1.8%	0.5%
Oil	52	67	149	199	229	229	225	2.5%	8.3%	2.9%	1.4%	0.0%	-0.2%
Natural gas	110	88	106	135	234	321	380	-2.2%	1.9%	2.5%	5.6%	3.2%	1.7%
Biomass	1	1	2	4	6	6	7	5.2%	0.9%	9.2%	3.7%	1.4%	0.8%
Nuclear <sup>1</sup>	0	1	1	1	2	4	6	n.s.	2.2%	0.2%	14.0%	6.0%	2.6%
Hydro	4	4	5	5	6	6	6	-0.6%	2.3%	-0.4%	1.0%	0.0%	0.0%
Other renewables	0	0	0	0	2	6	11	n.s.	n.s.	54.0%	39.4%	9.8%	6.0%
Net Imports	26	-49	-128	-160	-262	-326	-349						
Coal	-3	-14	-15	-21	-37	-59	-56						
Oil	41	-31	-115	-148	-177	-176	-173						
Natural gas	-14	-5	2	8	-55	-102	-134						
Biomass	0	0	0	2	7	11	13						
Biofuels	0	0	0	0	0	0	1						
Electricity	1	1	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	250	150	188	262	306	353	397	-4.9%	2.3%	3.3%	1.6%	1.4%	1.2%
Coal	53	24	38	56	52	47	56	-7.6%	4.8%	3.9%	-0.8%	-0.9%	1.7%
Oil	94	36	35	51	53	53	52	-9.1%	-0.3%	3.8%	0.4%	0.0%	-0.1%
Natural gas	96	84	108	143	179	219	246	-1.4%	2.6%	2.9%	2.3%	2.0%	1.1%
Biomass	1	1	2	6	12	17	20	5.1%	0.9%	13.4%	8.3%	3.6%	1.4%
Nuclear <sup>1</sup>	0	1	1	1	2	4	6	n.s.	2.2%	0.2%	14.0%	6.0%	2.6%
Hydro	4	4	5	5	6	6	6	-0.6%	2.3%	-0.4%	1.0%	0.0%	0.0%
Other renewables	0	0	0	0	2	6	11	n.s.	n.s.	54.0%	39.4%	9.8%	6.0%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	250	150	188	262	306	353	397	-4.9%	2.3%	3.3%	1.6%	1.4%	1.2%
Energy for Power Generation	84	56	63	81	100	120	146	-4.0%	1.1%	2.5%	2.2%	1.8%	1.9%
Other Energy Transformation & Losses	28	22	36	50	63	77	87	-2.1%	4.9%	3.3%	2.3%	2.0%	1.2%
Final consumption	189	100	121	170	194	220	240	-6.1%	1.9%	3.5%	1.3%	1.3%	0.9%
Steel, Non-Met. Minerals and Chem.	8	6	13	27	40	40	34	-3.4%	8.7%	7.4%	4.1%	-0.2%	-1.5%
Other Industry	51	23	26	35	37	43	50	-7.8%	1.2%	3.3%	0.3%	1.7%	1.4%
Non-Energy Use	15	7	6	8	9	11	12	-7.7%	-1.9%	3.7%	1.4%	1.7%	1.0%
Residential	14	27	30	38	37	41	46	7.2%	1.0%	2.3%	-0.2%	0.9%	1.2%
Services	72	22	25	34	39	48	57	-11.2%	1.4%	3.0%	1.4%	2.1%	1.8%
Agriculture	8	5	5	6	7	9	10	-5.1%	-0.4%	2.3%	2.2%	1.8%	1.5%
Road	18	9	14	19	21	25	27	-6.5%	4.4%	3.0%	1.1%	1.5%	0.8%
Rail	2	1	1	1	2	2	2	-7.3%	1.2%	2.4%	2.1%	1.5%	0.8%
Aviation	1	0	0	1	1	1	2	-1.0%	-1.0%	4.5%	3.7%	3.6%	1.2%
Other Transport	0	0	0	0	0	0	0	-7.8%	2.9%	4.8%	3.2%	2.0%	0.8%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Other CIS	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>80</b>	<b>51</b>	<b>57</b>	<b>75</b>	<b>90</b>	<b>104</b>	<b>124</b>	<b>-4.3%</b>	<b>1.0%</b>	<b>2.8%</b>	<b>1.9%</b>	<b>1.5%</b>	<b>1.7%</b>
Coal	28	16	19	26	23	24	37	-5.5%	2.0%	3.0%	-1.3%	0.7%	4.2%
Oil	19	7	1	4	5	4	5	-9.8%	-19.6%	16.9%	2.6%	-2.3%	2.2%
Gas	32	29	37	43	59	73	76	-1.2%	2.5%	1.6%	3.2%	2.1%	0.5%
Biomass & Waste	0	0	0	2	3	3	6	n.s.	n.s.	37.2%	3.8%	-0.4%	6.3%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>295</b>	<b>201</b>	<b>256</b>	<b>357</b>	<b>508</b>	<b>656</b>	<b>800</b>	<b>-3.8%</b>	<b>2.4%</b>	<b>3.4%</b>	<b>3.6%</b>	<b>2.6%</b>	<b>2.0%</b>
Coal	73	38	69	94	95	110	169	-6.3%	6.1%	3.1%	0.0%	1.5%	4.4%
of which CCS	0	0	0	0	8	46	106	n.s.	n.s.	n.s.	n.s.	19.2%	8.7%
Oil	53	23	2	16	21	16	21	-8.1%	-19.9%	20.5%	2.6%	-2.3%	2.4%
Gas	116	88	119	181	298	392	410	-2.7%	3.0%	4.3%	5.1%	2.8%	0.4%
of which CCS	0	0	0	0	21	118	216	n.s.	n.s.	n.s.	n.s.	18.6%	6.2%
Biomass & Waste	0	0	0	3	5	12	28	n.s.	n.s.	39.6%	5.6%	10.5%	8.7%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	46.5%
Nuclear	0	2	2	3	10	18	24	n.s.	2.2%	0.2%	14.6%	6.2%	2.7%
Hydro	52	49	62	60	66	66	66	-0.6%	2.3%	-0.4%	1.0%	0.0%	0.0%
Wind	0	0	0	1	12	32	59	n.s.	n.s.	51.5%	31.0%	10.2%	6.4%
Solar	0	0	0	0	2	9	21	n.s.	n.s.	n.s.	38.7%	14.9%	9.2%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	35.8%	19.4%	14.3%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>88</b>	<b>66</b>	<b>72</b>	<b>71</b>	<b>99</b>	<b>134</b>	<b>162</b>	<b>-2.8%</b>	<b>0.9%</b>	<b>-0.2%</b>	<b>3.3%</b>	<b>3.1%</b>	<b>1.9%</b>
Coal	15	15	15	15	18	20	27	-0.4%	0.3%	-0.1%	1.8%	1.3%	2.8%
of which CCS	0	0	0	0	1	6	15	n.s.	n.s.	n.s.	n.s.	19.7%	8.9%
Oil	50	7	7	6	4	4	4	-17.6%	-0.4%	-2.2%	-3.6%	-0.5%	1.5%
Gas	23	29	32	33	50	68	66	2.5%	1.2%	0.1%	4.3%	3.2%	-0.3%
of which CCS	0	0	0	0	3	16	31	n.s.	n.s.	n.s.	n.s.	19.8%	6.5%
Biomass & Waste	0	0	1	1	1	2	4	n.s.	n.s.	1.8%	0.7%	9.8%	8.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	46.6%
Nuclear	0	0	0	0	2	3	4	n.s.	0.0%	0.1%	14.4%	6.0%	2.5%
Hydro	0	15	17	17	18	18	18	n.s.	1.0%	-0.2%	1.0%	0.0%	0.0%
Wind	0	0	0	0	5	13	24	n.s.	n.s.	50.3%	30.7%	10.0%	6.2%
Solar	0	0	0	0	2	6	15	n.s.	n.s.	n.s.	38.6%	14.8%	9.1%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	18.9%	13.8%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>189</b>	<b>100</b>	<b>121</b>	<b>170</b>	<b>194</b>	<b>220</b>	<b>240</b>	<b>-6.1%</b>	<b>1.9%</b>	<b>3.5%</b>	<b>1.3%</b>	<b>1.3%</b>	<b>0.9%</b>
Coal	23	7	17	28	26	20	16	-11.3%	9.3%	4.8%	-0.7%	-2.4%	-2.3%
Oil	60	24	30	39	39	40	39	-8.8%	2.1%	2.7%	0.1%	0.3%	-0.3%
Gas	53	39	41	60	70	85	100	-2.9%	0.4%	3.9%	1.5%	2.0%	1.6%
Electricity	23	13	16	24	33	43	53	-5.0%	2.0%	3.6%	3.6%	2.6%	2.0%
Heat	29	15	15	15	16	17	18	-6.4%	0.0%	0.1%	0.6%	0.7%	0.6%
Biomass & Other	1	1	1	5	9	13	14	5.1%	-0.1%	12.4%	7.4%	3.5%	0.4%
Share of Renewables <sup>3</sup> (%)	5%	7%	7%	6%	9%	12%	13%	4.3%	-0.6%	-1.7%	4.6%	2.7%	1.4%
<b>Industry (incl. non-energy use)</b>	<b>74</b>	<b>35</b>	<b>44</b>	<b>70</b>	<b>86</b>	<b>94</b>	<b>96</b>	<b>-7.2%</b>	<b>2.4%</b>	<b>4.7%</b>	<b>2.0%</b>	<b>0.9%</b>	<b>0.2%</b>
Coal	19	6	12	23	23	19	16	-10.6%	7.0%	6.5%	0.3%	-1.9%	-2.1%
Oil	22	7	6	9	10	11	11	-11.1%	-0.7%	3.3%	1.6%	0.9%	0.1%
Gas	12	11	13	23	30	36	38	-1.0%	1.3%	6.1%	2.8%	1.6%	0.7%
Electricity	13	6	8	11	16	20	24	-8.1%	3.4%	3.5%	3.9%	2.5%	1.8%
Heat	8	5	5	4	4	4	4	-3.8%	-0.2%	-1.9%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	0	0	0	2	3	2	n.s.	-2.4%	23.1%	16.9%	5.5%	-2.8%
<b>Buildings</b>	<b>86</b>	<b>49</b>	<b>56</b>	<b>72</b>	<b>76</b>	<b>89</b>	<b>103</b>	<b>-5.3%</b>	<b>1.2%</b>	<b>2.6%</b>	<b>0.6%</b>	<b>1.5%</b>	<b>1.5%</b>
Coal	5	1	5	5	2	1	0	-14.7%	18.3%	-0.8%	-6.8%	-9.8%	-10.1%
Oil	16	4	6	8	7	7	6	-12.1%	3.6%	2.1%	-1.0%	-0.2%	-0.5%
Gas	39	28	28	36	38	48	59	-3.3%	-0.1%	2.8%	0.5%	2.2%	2.2%
Electricity	4	5	6	9	11	14	18	1.8%	1.0%	4.1%	2.6%	2.4%	2.2%
Heat	21	10	10	11	12	13	14	-7.6%	0.2%	1.1%	0.9%	1.0%	0.9%
Biomass & Other	1	1	1	4	6	6	5	4.6%	-0.4%	11.5%	3.7%	0.8%	-1.3%
<b>Agriculture</b>	<b>8</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>9</b>	<b>10</b>	<b>-5.1%</b>	<b>-0.4%</b>	<b>2.3%</b>	<b>2.2%</b>	<b>1.8%</b>	<b>1.5%</b>
Coal	0	0	0	0	0	0	0	-26.7%	43.6%	-0.7%	-3.0%	-4.4%	-4.4%
Oil	3	2	2	2	2	2	2	-1.8%	-1.8%	2.0%	-0.1%	-1.4%	-1.8%
Gas	1	0	0	0	0	0	0	-17.0%	3.6%	3.8%	0.3%	-0.7%	-1.1%
Electricity	4	2	2	3	4	5	7	-5.6%	-0.4%	2.7%	3.4%	2.9%	2.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	2	8.3%	18.3%	2.6%	19.2%	8.0%	3.8%
<b>Transport</b>	<b>21</b>	<b>11</b>	<b>16</b>	<b>21</b>	<b>24</b>	<b>28</b>	<b>31</b>	<b>-6.4%</b>	<b>4.0%</b>	<b>3.0%</b>	<b>1.2%</b>	<b>1.6%</b>	<b>0.9%</b>
Coal	0	0	0	0	0	0	0	-9.9%	3.8%	5.4%	0.0%	0.0%	0.0%
Oil	20	10	15	20	19	20	19	-6.2%	3.7%	2.9%	-0.1%	0.4%	-0.4%
Gas	0	0	0	0	1	2	2	-7.0%	12.3%	1.2%	9.4%	4.9%	3.9%
Electricity	1	0	1	1	2	3	4	-10.3%	6.1%	3.7%	8.3%	4.2%	2.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	2	3	5	n.s.	n.s.	36.3%	19.7%	7.4%	4.0%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>28</b>	<b>22</b>	<b>36</b>	<b>50</b>	<b>63</b>	<b>77</b>	<b>87</b>	<b>-2.1%</b>	<b>4.9%</b>	<b>3.3%</b>	<b>2.3%</b>	<b>2.0%</b>	<b>1.2%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Argentina	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	33	37	41	46	49	53	55	1.2%	1.1%	1.0%	0.8%	0.7%	0.5%
GDP per capita (ppp, k\$'05)	7	10	13	15	19	23	27	3.3%	2.7%	1.4%	2.0%	1.9%	1.7%
GDP per capita (mer, k\$'05)	4	5	7	8	10	12	14	3.3%	2.7%	1.4%	2.0%	1.9%	1.7%
Share Value Added - Agriculture (%)	10	6	7	6	5	5	5	-3.8%	1.3%	-2.4%	-0.6%	-0.5%	-0.3%
Share Value Added - Industry (%)	39	33	39	37	36	35	33	-1.7%	1.7%	-0.5%	-0.3%	-0.4%	-0.4%
Share Value Added - Services (%)	52	61	54	57	59	60	62	1.6%	-1.2%	0.6%	0.3%	0.3%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	14	17	19	-4.2%	5.6%	-0.1%	0.9%	1.7%	1.2%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	17	26	20	23	39	59	83	4.7%	-2.5%	1.3%	5.5%	4.1%	3.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	322	360	394	369	387	342	258	1.1%	0.9%	-0.7%	0.5%	-1.2%	-2.8%
Total GHG (excl. sinks)	363	408	437	398	411	368	334	1.2%	0.7%	-0.9%	0.3%	-1.1%	-1.0%
Total GHG (energy, industry, agriculture)	246	289	332	315	344	357	334	1.6%	1.4%	-0.5%	0.9%	0.4%	-0.6%
CO <sub>2</sub>	111	154	196	178	201	223	217	3.4%	2.4%	-0.9%	1.2%	1.1%	-0.3%
CH <sub>4</sub>	98	97	85	83	85	76	65	-0.2%	-1.2%	-0.3%	0.2%	-1.1%	-1.5%
N <sub>2</sub> O	35	38	50	53	58	57	52	0.9%	2.9%	0.6%	0.8%	-0.2%	-0.9%
F gases	2	0	1	1	1	1	1	-19.9%	9.2%	1.5%	2.3%	-4.1%	0.5%
Total GHG from Energy and Industry	137	183	223	201	223	241	233	3.0%	2.0%	-1.1%	1.0%	0.8%	-0.3%
CO <sub>2</sub> Emissions from Fuel Comb.	105	147	187	168	190	211	204	3.4%	2.4%	-1.0%	1.2%	1.1%	-0.3%
Power generation/District heating	19	30	45	35	52	72	70	4.7%	4.2%	-2.4%	4.0%	3.2%	-0.3%
Industry	16	29	34	37	42	47	48	6.0%	1.5%	0.8%	1.3%	1.3%	0.3%
Buildings	18	20	27	24	24	23	20	1.0%	3.0%	-0.9%	-0.1%	-0.6%	-1.5%
Agriculture	5	8	11	10	11	12	12	5.1%	3.3%	-0.7%	1.2%	0.9%	0.0%
Transport	29	41	44	43	40	37	35	3.7%	0.5%	-0.1%	-0.7%	-0.8%	-0.6%
Other	18	19	27	19	20	20	19	0.5%	3.7%	-3.7%	0.8%	-0.1%	-0.4%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	1	13	n.s.	n.s.	n.s.	-0.4%	n.s.	32.9%
Coal	0	0	0	0	0	1	12	n.s.	n.s.	n.s.	-0.2%	n.s.	35.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-0.5%	52.4%	16.1%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-0.7%	32.7%	4.8%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	46	79	78	47	38	40	52	5.7%	-0.1%	-4.9%	-2.1%	0.5%	2.5%
Coal	0	0	0	0	0	0	1	0.2%	-12.8%	9.7%	9.3%	5.5%	1.6%
Oil	26	41	35	18	11	5	2	4.9%	-1.6%	-6.4%	-4.8%	-7.7%	-7.4%
Natural gas	15	31	33	14	9	9	13	7.6%	0.7%	-8.2%	-4.2%	-0.2%	3.9%
Biomass	2	3	5	8	10	14	19	6.4%	6.4%	4.8%	2.1%	3.2%	3.0%
Nuclear <sup>1</sup>	2	2	2	3	3	4	5	-1.6%	1.5%	3.2%	0.5%	3.5%	3.0%
Hydro	2	2	3	3	3	3	4	4.7%	1.6%	-0.3%	1.3%	0.8%	1.1%
Other renewables	0	0	0	1	2	5	7	n.s.	12.3%	n.s.	2.6%	9.7%	5.1%
Net Imports	0	-17	3	29	47	57	55						
Coal	1	1	2	3	7	16	19						
Oil	-6	-18	-3	7	12	17	18						
Natural gas	4	0	5	22	29	26	21						
Biomass	0	0	0	-2	-3	-3	-3						
Biofuels	0	0	-1	-1	-1	-1	-1						
Electricity	0	0	1	2	2	2	2						
Primary Energy Demand <sup>2</sup>	45	62	81	77	86	97	107	3.2%	2.7%	-0.5%	1.1%	1.3%	0.9%
Coal	1	1	2	3	8	17	20	-2.3%	5.8%	4.0%	11.3%	8.0%	1.8%
Oil	20	23	31	24	23	22	20	1.7%	3.0%	-2.5%	-0.5%	-0.7%	-0.8%
Natural gas	19	30	38	36	38	35	34	4.9%	2.2%	-0.5%	0.6%	-0.9%	-0.3%
Biomass	2	3	5	6	8	11	16	6.4%	6.4%	1.9%	2.1%	3.8%	3.5%
Nuclear <sup>1</sup>	2	2	2	3	3	4	5	-1.6%	1.5%	3.2%	0.5%	3.5%	3.0%
Hydro	2	2	3	3	3	3	4	4.7%	1.6%	-0.3%	1.3%	0.8%	1.1%
Other renewables	0	0	0	1	2	5	7	n.s.	12.3%	n.s.	2.6%	9.7%	5.1%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	45	62	81	77	86	97	107	3.2%	2.7%	-0.5%	1.1%	1.3%	0.9%
Energy for Power Generation	11	16	23	21	26	35	44	4.2%	3.4%	-1.0%	2.4%	2.9%	2.3%
Other Energy Transformation & Losses	7	5	12	9	10	11	12	-2.6%	8.5%	-3.2%	1.1%	0.6%	0.9%
Final consumption	31	47	56	58	64	71	76	4.3%	1.8%	0.4%	0.9%	1.1%	0.7%
Steel, Non-Met. Minerals and Chem.	1	3	3	4	4	3	3	13.4%	1.7%	2.3%	-0.5%	-0.5%	-1.3%
Other Industry	8	12	14	14	16	20	23	4.2%	0.8%	0.1%	1.9%	2.0%	1.3%
Non-Energy Use	2	4	5	6	7	8	9	9.1%	0.8%	2.7%	1.3%	1.4%	0.8%
Residential	6	9	13	12	13	13	13	3.9%	3.0%	0.0%	0.1%	0.5%	0.1%
Services	3	3	4	4	5	6	7	0.2%	4.2%	-0.5%	2.2%	2.2%	1.5%
Agriculture	2	3	4	3	4	4	5	5.3%	3.5%	-0.5%	1.2%	1.1%	1.0%
Road	9	12	14	14	15	15	15	3.3%	1.3%	0.3%	0.0%	0.3%	0.3%
Rail	0	0	0	0	0	0	0	5.2%	2.5%	-0.1%	1.9%	1.7%	1.4%
Aviation	1	0	0	0	1	1	1	-3.3%	-3.0%	2.1%	3.1%	2.7%	2.1%
Other Transport	0	0	0	0	0	1	1	24.3%	14.7%	0.6%	2.3%	1.6%	1.1%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%



Argentina	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	7	12	18	14	19	23	27	5.3%	3.9%	-2.6%	3.0%	2.3%	1.7%
Coal	0	0	1	2	6	14	16	3.8%	5.1%	9.8%	12.2%	8.3%	1.4%
Oil	2	1	4	3	2	2	1	-5.9%	15.6%	-3.8%	-2.5%	-2.7%	-2.2%
Gas	5	11	13	8	9	5	5	7.4%	1.7%	-4.3%	0.7%	-6.3%	0.0%
Biomass & Waste	0	0	1	1	1	3	5	6.6%	13.5%	3.7%	3.0%	7.4%	6.0%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	51	89	126	127	163	221	280	5.7%	3.5%	0.1%	2.6%	3.1%	2.4%
Coal	1	2	3	8	31	74	85	11.4%	4.7%	11.6%	14.0%	8.9%	1.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	46.6%
Oil	5	3	17	11	9	7	6	-5.4%	19.2%	-4.1%	-2.4%	-2.5%	-2.0%
Gas	20	49	63	45	49	27	27	9.4%	2.6%	-3.3%	0.9%	-5.8%	0.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	10.5%
Biomass & Waste	0	1	2	3	5	13	25	20.2%	12.5%	4.0%	5.3%	9.2%	6.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	7	6	7	10	10	15	21	-1.6%	1.5%	3.4%	0.5%	3.8%	3.2%
Hydro	18	29	34	33	37	40	45	4.7%	1.6%	-0.3%	1.3%	0.8%	1.1%
Wind	0	0	0	16	18	38	53	n.s.	12.3%	n.s.	1.6%	7.6%	3.3%
Solar	0	0	0	1	2	7	17	n.s.	n.s.	n.s.	14.9%	11.3%	10.1%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	32.0%	17.1%	13.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	17	23	32	43	48	69	89	2.9%	3.6%	2.8%	1.0%	3.7%	2.6%
Coal	1	1	1	1	4	11	13	-1.9%	0.0%	5.3%	14.1%	9.7%	2.0%
of which CCS	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	n.s.	46.9%
Oil	2	1	2	2	2	2	3	-3.8%	4.9%	1.1%	-4.6%	3.4%	2.5%
Gas	7	11	17	18	16	15	13	4.8%	4.8%	0.8%	-1.3%	-0.7%	-1.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	11.2%
Biomass & Waste	0	0	1	0	1	2	4	19.6%	12.8%	-0.3%	4.6%	9.6%	7.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	1	1	1	2	2	2	3	0.0%	0.0%	5.6%	0.3%	3.6%	3.0%
Hydro	7	9	11	12	13	14	16	3.0%	2.1%	0.6%	1.3%	0.8%	1.1%
Wind	0	0	0	7	8	16	21	n.s.	13.6%	n.s.	1.6%	7.5%	3.0%
Solar	0	0	0	1	2	6	16	n.s.	n.s.	n.s.	14.3%	10.4%	9.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.6%	12.9%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	31	47	56	58	64	71	76	4.3%	1.8%	0.4%	0.9%	1.1%	0.7%
Coal	1	1	1	1	2	2	3	0.1%	1.0%	1.2%	6.5%	4.3%	2.1%
Oil	16	22	25	23	23	22	20	3.6%	1.1%	-0.6%	-0.3%	-0.4%	-0.6%
Gas	10	15	19	22	23	24	23	4.4%	2.6%	1.3%	0.6%	0.5%	-0.3%
Electricity	4	6	10	10	13	17	21	6.4%	4.1%	0.3%	2.3%	2.8%	2.3%
Heat	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	39.8%	7.7%
Biomass & Other	1	3	2	3	4	6	8	6.4%	-3.2%	4.1%	3.9%	3.5%	2.8%
Share of Renewables <sup>3</sup> (%)	10%	12%	9%	13%	17%	25%	34%	1.5%	-2.1%	3.3%	3.0%	3.9%	3.0%
<b>Industry (incl. non-energy use)</b>	11	19	21	24	27	31	34	6.0%	1.0%	1.0%	1.4%	1.6%	0.9%
Coal	1	1	1	1	2	2	3	0.1%	1.0%	1.2%	6.5%	4.3%	2.1%
Oil	3	7	7	7	7	6	6	9.3%	0.6%	-0.2%	-0.5%	-0.6%	-1.0%
Gas	4	7	8	10	12	14	14	4.3%	2.1%	2.5%	1.5%	1.4%	0.3%
Electricity	2	3	4	4	5	7	9	4.8%	3.3%	0.4%	1.9%	2.9%	2.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	2	1	1	1	2	3	7.0%	-8.1%	-1.1%	4.1%	3.7%	3.7%
<b>Buildings</b>	9	12	16	16	17	19	20	2.9%	3.3%	-0.1%	0.6%	1.0%	0.5%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	1	2	1	1	1	1	-3.5%	4.1%	-5.7%	-1.8%	-1.4%	-1.5%
Gas	5	7	9	9	9	9	7	2.8%	2.7%	0.2%	0.2%	-0.5%	-1.5%
Electricity	2	3	5	6	6	7	9	8.1%	4.7%	0.2%	1.0%	1.7%	1.6%
Heat	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	39.8%	7.7%
Biomass & Other	0	0	0	1	1	2	2	2.8%	-3.7%	8.5%	5.5%	3.9%	1.9%
<b>Agriculture</b>	2	3	4	3	4	4	5	5.3%	3.5%	-0.5%	1.2%	1.1%	1.0%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	2	3	3	4	4	4	5.1%	3.3%	-0.7%	1.2%	0.9%	0.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	2.5%	5.2%	1.6%	2.0%	4.0%	7.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	1	n.s.	10.4%	2.2%	0.0%	3.4%	8.5%
<b>Transport</b>	10	13	15	15	16	16	17	3.0%	1.3%	0.4%	0.2%	0.4%	0.4%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	9	11	12	12	11	10	10	2.0%	0.4%	-0.2%	-0.4%	-0.7%	-0.6%
Gas	0	1	2	2	2	1	1	22.7%	4.7%	0.5%	-3.2%	-1.8%	-0.2%
Electricity	0	0	0	0	1	2	3	5.2%	2.5%	4.7%	28.5%	7.3%	3.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	1	1	2	2	3	n.s.	n.s.	8.1%	3.2%	3.2%	2.0%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	7	5	12	9	10	11	12	-2.6%	8.5%	-3.2%	1.1%	0.6%	0.9%

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Brazil	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	150	176	199	216	229	236	238	1.6%	1.2%	0.8%	0.6%	0.3%	0.1%
GDP per capita (ppp, k\$'05)	7	8	10	9	12	15	18	1.0%	2.4%	-0.5%	2.1%	2.4%	2.0%
GDP per capita (mer, k\$'05)	4	4	6	5	7	8	10	1.0%	2.4%	-0.3%	2.1%	2.4%	2.0%
Share Value Added - Agriculture (%)	8	6	5	6	5	5	4	-3.6%	-0.5%	0.6%	-1.0%	-0.9%	-0.6%
Share Value Added - Industry (%)	39	28	28	26	26	24	23	-3.3%	0.1%	-0.6%	-0.3%	-0.6%	-0.7%
Share Value Added - Services (%)	53	67	67	68	69	71	73	2.3%	0.0%	0.2%	0.2%	0.3%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	14	17	19	-4.2%	5.6%	-0.1%	0.9%	1.7%	1.2%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	17	26	20	23	39	59	83	4.7%	-2.5%	1.3%	5.5%	4.1%	3.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	1 395	2 094	1 294	1 231	1 174	1 186	846	4.1%	-4.7%	-0.5%	-0.5%	0.1%	-3.3%
Total GHG (excl. sinks)	1 395	2 094	1 294	1 231	1 197	1 269	1 196	4.1%	-4.7%	-0.5%	-0.3%	0.6%	-0.6%
Total GHG (energy, industry, agriculture)	633	830	977	1 071	1 145	1 269	1 196	2.7%	1.6%	0.9%	0.7%	1.0%	-0.6%
CO <sub>2</sub>	227	348	438	485	563	665	669	4.4%	2.3%	1.0%	1.5%	1.7%	0.1%
CH <sub>4</sub>	285	338	357	383	372	383	323	1.7%	0.6%	0.7%	-0.3%	0.3%	-1.7%
N <sub>2</sub> O	118	142	175	195	203	213	197	1.9%	2.1%	1.1%	0.4%	0.5%	-0.8%
F gases	4	2	6	7	7	7	7	-5.9%	12.0%	1.2%	-1.1%	1.3%	-0.2%
Total GHG from Energy and Industry	280	411	514	570	639	742	736	3.9%	2.2%	1.0%	1.2%	1.5%	-0.1%
CO <sub>2</sub> Emissions from Fuel Comb.	200	308	395	434	502	594	595	4.4%	2.5%	1.0%	1.5%	1.7%	0.0%
Power generation/District heating	10	27	40	7	21	54	65	10.5%	4.0%	-15.7%	11.4%	9.8%	1.9%
Industry	59	94	111	119	155	195	207	4.7%	1.7%	0.7%	2.7%	2.3%	0.6%
Buildings	20	25	23	20	17	14	12	2.2%	-0.6%	-1.5%	-1.9%	-1.5%	-1.5%
Agriculture	10	14	19	20	21	22	21	3.5%	2.5%	0.6%	0.5%	0.4%	-0.4%
Transport	80	124	171	229	246	262	242	4.5%	3.3%	3.0%	0.7%	0.7%	-0.8%
Other	20	24	31	39	43	47	47	1.7%	2.6%	2.2%	1.1%	0.8%	0.2%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	2	17	n.s.	n.s.	n.s.	n.s.	26.5%	23.0%
Coal	0	0	0	0	0	2	16	n.s.	n.s.	n.s.	n.s.	28.9%	23.2%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	11.7%	9.3%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	5.1%	22.9%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	95	143	240	401	446	469	520	4.1%	5.4%	5.2%	1.1%	0.5%	1.0%
Coal	2	3	2	2	3	4	5	6.4%	-2.6%	-1.3%	3.9%	4.2%	1.8%
Oil	32	63	105	222	198	140	106	6.9%	5.3%	7.7%	-1.1%	-3.4%	-2.8%
Natural gas	3	6	12	24	33	44	62	9.3%	6.9%	7.2%	3.1%	3.0%	3.4%
Biomass	41	43	82	100	148	197	248	0.6%	6.6%	2.0%	4.0%	2.9%	2.3%
Nuclear <sup>1</sup>	1	2	4	5	5	14	19	10.5%	9.2%	1.7%	1.2%	10.8%	3.1%
Hydro	18	26	35	42	43	47	48	3.9%	2.9%	2.0%	0.3%	0.7%	0.3%
Other renewables	0	0	1	6	16	23	31	n.s.	33.4%	27.1%	10.2%	3.5%	3.3%
Net Imports	40	45	28	-126	-119	-71	-73						
Coal	9	14	16	15	22	33	38						
Oil	27	25	-1	-101	-67	-1	25						
Natural gas	1	2	11	-4	-8	-13	-25						
Biomass	0	0	0	-38	-66	-84	-96						
Biofuels	1	0	-1	0	-2	-8	-18						
Electricity	2	4	3	3	3	3	3						
Primary Energy Demand <sup>2</sup>	135	187	268	275	327	399	447	3.3%	3.7%	0.3%	1.7%	2.0%	1.1%
Coal	11	17	18	17	24	38	43	4.6%	0.7%	-0.6%	3.7%	4.4%	1.4%
Oil	59	88	104	121	131	140	131	4.0%	1.7%	1.5%	0.8%	0.6%	-0.6%
Natural gas	3	8	23	20	24	31	37	9.2%	11.4%	-1.6%	2.1%	2.3%	1.9%
Biomass	41	43	82	61	82	113	152	0.6%	6.6%	-2.8%	2.9%	3.3%	3.0%
Nuclear <sup>1</sup>	1	2	4	5	5	14	19	10.5%	9.2%	1.7%	1.2%	10.8%	3.1%
Hydro	18	26	35	42	43	47	48	3.9%	2.9%	2.0%	0.3%	0.7%	0.3%
Other renewables	0	0	1	6	16	23	31	n.s.	33.4%	27.1%	10.2%	3.5%	3.3%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	135	187	268	275	327	399	447	3.3%	3.7%	0.3%	1.7%	2.0%	1.1%
Energy for Power Generation	22	37	58	56	75	109	137	5.5%	4.6%	-0.5%	3.0%	3.8%	2.3%
Other Energy Transformation & Losses	23	28	48	45	59	76	95	1.7%	5.7%	-0.6%	2.6%	2.7%	2.2%
Final consumption	114	156	215	229	264	305	324	3.2%	3.2%	0.6%	1.4%	1.4%	0.6%
Steel, Non-Met. Minerals and Chem.	21	27	32	31	35	39	39	2.4%	1.6%	-0.2%	1.2%	1.0%	0.1%
Other Industry	21	32	51	50	64	78	89	3.9%	4.9%	-0.3%	2.5%	2.1%	1.3%
Non-Energy Use	9	14	17	15	17	19	20	3.8%	2.2%	-1.4%	1.3%	1.3%	0.5%
Residential	18	21	24	23	24	27	29	1.4%	1.4%	-0.2%	0.5%	1.0%	0.7%
Services	5	8	11	13	16	21	26	5.1%	2.7%	1.8%	2.3%	2.7%	2.2%
Agriculture	6	7	10	11	12	13	14	2.0%	3.1%	1.1%	0.7%	0.7%	0.6%
Road	29	43	65	80	89	99	97	3.8%	4.2%	2.2%	1.1%	1.0%	-0.2%
Rail	1	1	1	1	1	1	1	-2.0%	7.6%	1.0%	0.7%	0.9%	0.7%
Aviation	2	3	3	4	5	6	7	5.2%	0.2%	1.3%	2.1%	2.6%	1.4%
Other Transport	1	1	1	1	2	2	2	-1.6%	4.1%	-1.1%	2.0%	1.8%	0.9%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Brazil	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>4</b>	<b>9</b>	<b>19</b>	<b>3</b>	<b>11</b>	<b>26</b>	<b>39</b>	<b>10.4%</b>	<b>7.4%</b>	<b>-17.6%</b>	<b>14.2%</b>	<b>9.4%</b>	<b>4.2%</b>
Coal	1	3	3	1	4	11	15	8.3%	-0.2%	-12.3%	17.3%	10.9%	2.4%
Oil	1	4	4	0	0	0	0	11.7%	-0.4%	-47.1%	-0.6%	1.6%	20.1%
Gas	0	1	7	2	2	4	7	28.1%	22.8%	-13.0%	2.6%	5.7%	7.0%
Biomass & Waste	1	2	6	0	4	11	17	7.7%	14.0%	-25.3%	30.1%	9.4%	4.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>223</b>	<b>349</b>	<b>515</b>	<b>575</b>	<b>733</b>	<b>947</b>	<b>1 155</b>	<b>4.6%</b>	<b>4.0%</b>	<b>1.1%</b>	<b>2.5%</b>	<b>2.6%</b>	<b>2.0%</b>
Coal	5	11	11	4	19	59	76	8.8%	0.3%	-10.9%	18.2%	12.0%	2.7%
of which CCS	0	0	0	0	0	1	15	n.s.	n.s.	n.s.	n.s.	36.1%	40.6%
Oil	5	15	16	0	0	0	0	11.9%	0.6%	-46.9%	-0.6%	1.8%	20.3%
Gas	0	4	36	9	12	22	43	28.7%	24.5%	-12.6%	2.6%	5.8%	7.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	20.2%	14.5%
Biomass & Waste	4	8	31	2	21	51	82	7.4%	14.9%	-26.0%	29.5%	9.4%	5.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	2	6	15	17	20	57	79	10.5%	9.2%	1.8%	1.3%	11.3%	3.2%
Hydro	207	304	403	492	506	541	557	3.9%	2.9%	2.0%	0.3%	0.7%	0.3%
Wind	0	0	2	47	130	134	159	n.s.	n.s.	36.8%	10.6%	0.3%	1.7%
Solar	0	0	0	4	26	82	151	n.s.	n.s.	n.s.	21.9%	12.1%	6.3%
Other	0	0	0	0	0	2	7	n.s.	n.s.	n.s.	30.8%	19.1%	13.6%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>54</b>	<b>74</b>	<b>113</b>	<b>205</b>	<b>271</b>	<b>353</b>	<b>416</b>	<b>3.3%</b>	<b>4.3%</b>	<b>6.2%</b>	<b>2.8%</b>	<b>2.7%</b>	<b>1.7%</b>
Coal	1	2	2	5	6	18	23	2.7%	0.1%	10.1%	2.2%	10.8%	2.4%
of which CCS	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	38.2%	40.4%
Oil	4	6	8	16	21	27	28	3.5%	2.9%	7.0%	2.6%	2.7%	0.5%
Gas	0	1	11	22	25	31	24	12.0%	23.2%	6.7%	1.4%	2.4%	-2.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	22.9%	13.7%
Biomass & Waste	1	2	8	20	30	34	37	5.1%	16.0%	9.7%	4.2%	1.5%	0.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	1	2	2	2	3	8	10	11.8%	0.0%	1.9%	1.0%	10.9%	3.0%
Hydro	46	61	81	112	115	123	126	3.0%	2.8%	3.3%	0.3%	0.7%	0.3%
Wind	0	0	1	26	54	56	65	n.s.	46.8%	39.7%	7.5%	0.3%	1.5%
Solar	0	0	0	3	18	56	102	n.s.	n.s.	n.s.	21.7%	11.9%	6.2%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	30.1%	18.5%	13.1%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>114</b>	<b>156</b>	<b>215</b>	<b>229</b>	<b>264</b>	<b>305</b>	<b>324</b>	<b>3.2%</b>	<b>3.2%</b>	<b>0.6%</b>	<b>1.4%</b>	<b>1.4%</b>	<b>0.6%</b>
Coal	6	9	11	13	17	22	23	3.8%	2.4%	1.3%	2.8%	2.6%	0.8%
Oil	53	80	93	111	120	129	122	4.2%	1.6%	1.8%	0.8%	0.7%	-0.6%
Gas	2	5	13	12	16	20	22	7.2%	10.0%	-0.4%	2.9%	2.3%	0.9%
Electricity	18	28	38	42	53	68	84	4.3%	3.1%	1.0%	2.4%	2.6%	2.0%
Heat	0	0	0	2	3	4	4	n.s.	28.4%	16.0%	4.6%	4.5%	1.1%
Biomass & Other	35	35	60	49	56	61	69	0.1%	5.4%	-1.8%	1.2%	1.0%	1.1%
Share of Renewables <sup>3</sup> (%)	49%	42%	47%	44%	48%	50%	56%	-1.6%	1.1%	-0.7%	0.9%	0.5%	1.1%
<b>Industry (incl. non-energy use)</b>	<b>52</b>	<b>72</b>	<b>100</b>	<b>96</b>	<b>115</b>	<b>136</b>	<b>148</b>	<b>3.3%</b>	<b>3.3%</b>	<b>-0.4%</b>	<b>1.9%</b>	<b>1.7%</b>	<b>0.9%</b>
Coal	6	9	11	13	17	22	23	3.8%	2.4%	1.3%	2.8%	2.6%	0.8%
Oil	17	26	27	26	31	36	36	4.6%	0.2%	-0.2%	1.7%	1.4%	0.2%
Gas	2	4	10	10	13	16	17	7.0%	8.8%	-0.4%	3.0%	2.2%	0.4%
Electricity	10	13	17	17	22	28	34	2.7%	3.3%	-0.3%	2.8%	2.4%	1.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	18	20	34	30	32	34	38	1.5%	5.3%	-1.3%	0.7%	0.5%	1.2%
<b>Buildings</b>	<b>23</b>	<b>29</b>	<b>34</b>	<b>36</b>	<b>40</b>	<b>48</b>	<b>55</b>	<b>2.3%</b>	<b>1.8%</b>	<b>0.4%</b>	<b>1.2%</b>	<b>1.7%</b>	<b>1.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	6	8	7	6	4	3	3	2.3%	-0.9%	-2.0%	-3.0%	-2.2%	-2.1%
Gas	0	0	0	1	1	1	2	1.9%	7.3%	5.0%	5.3%	1.2%	0.1%
Electricity	8	14	19	22	26	33	40	5.9%	3.0%	1.8%	1.8%	2.3%	1.9%
Heat	0	0	0	2	3	4	4	n.s.	28.4%	16.0%	4.6%	4.5%	1.1%
Biomass & Other	9	7	8	6	6	6	6	-2.2%	1.1%	-3.3%	0.1%	0.1%	0.7%
<b>Agriculture</b>	<b>6</b>	<b>7</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>2.0%</b>	<b>3.1%</b>	<b>1.1%</b>	<b>0.7%</b>	<b>0.7%</b>	<b>0.6%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	5	6	6	7	7	7	3.5%	2.5%	0.6%	0.5%	0.4%	-0.4%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	1	1	2	2	3	3	4	6.8%	3.2%	4.7%	1.4%	1.5%	1.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	2	2	3	2	3	3	3	-2.8%	4.4%	-0.3%	0.4%	0.8%	1.9%
<b>Transport</b>	<b>33</b>	<b>47</b>	<b>70</b>	<b>86</b>	<b>97</b>	<b>108</b>	<b>107</b>	<b>3.7%</b>	<b>4.0%</b>	<b>2.0%</b>	<b>1.1%</b>	<b>1.1%</b>	<b>-0.1%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	27	41	54	73	79	83	76	4.4%	2.7%	3.2%	0.7%	0.6%	-0.9%
Gas	0	0	2	1	1	2	3	n.s.	21.9%	-2.9%	0.3%	4.2%	4.6%
Electricity	0	0	0	0	1	3	6	0.5%	2.9%	2.1%	21.1%	11.1%	6.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	6	6	15	11	15	19	21	-0.3%	9.3%	-2.6%	3.1%	2.2%	1.1%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>23</b>	<b>28</b>	<b>48</b>	<b>45</b>	<b>59</b>	<b>76</b>	<b>95</b>	<b>1.7%</b>	<b>5.7%</b>	<b>-0.6%</b>	<b>2.6%</b>	<b>2.7%</b>	<b>2.2%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Canada	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	28	31	34	38	40	42	44	1.0%	1.1%	1.0%	0.7%	0.5%	0.4%
GDP per capita (ppp, k\$'05)	27	33	35	39	44	50	58	1.9%	0.8%	0.9%	1.3%	1.4%	1.5%
GDP per capita (mer, k\$'05)	28	33	36	40	46	52	61	1.8%	0.8%	1.0%	1.3%	1.4%	1.5%
Share Value Added - Agriculture (%)	3	2	2	2	2	2	2	-2.3%	-1.7%	-0.3%	-0.4%	-0.4%	-0.3%
Share Value Added - Industry (%)	31	33	32	30	28	24	21	0.6%	-0.4%	-0.5%	-1.0%	-1.2%	-1.6%
Share Value Added - Services (%)	66	65	66	68	71	74	77	-0.2%	0.2%	0.3%	0.4%	0.5%	0.5%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	14	17	19	-4.2%	5.6%	-0.1%	0.9%	1.7%	1.2%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	17	26	20	23	39	59	83	4.7%	-2.5%	1.3%	5.5%	4.1%	3.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	522	679	780	807	583	562	432	2.7%	1.4%	0.3%	-3.2%	-0.4%	-2.6%
Total GHG (excl. sinks)	617	746	780	807	691	687	575	1.9%	0.4%	0.3%	-1.5%	-0.1%	-1.8%
Total GHG (energy, industry, agriculture)	599	734	721	730	638	598	531	2.1%	-0.2%	0.1%	-1.3%	-0.6%	-1.2%
CO <sub>2</sub>	458	569	563	589	519	476	411	2.2%	-0.1%	0.4%	-1.3%	-0.9%	-1.5%
CH <sub>4</sub>	72	95	89	74	62	65	65	2.8%	-0.7%	-1.8%	-1.8%	0.5%	0.0%
N <sub>2</sub> O	59	60	60	58	53	52	51	0.2%	0.1%	-0.4%	-0.9%	-0.1%	-0.3%
F gases	11	10	9	9	4	4	4	-0.4%	-1.2%	0.0%	-7.8%	0.5%	-1.5%
Total GHG from Energy and Industry	552	678	666	675	586	542	474	2.1%	-0.2%	0.1%	-1.4%	-0.8%	-1.3%
CO <sub>2</sub> Emissions from Fuel Comb.	431	535	533	556	492	451	389	2.2%	0.0%	0.4%	-1.2%	-0.9%	-1.5%
Power generation/District heating	96	134	109	66	46	27	6	3.3%	-2.1%	-4.8%	-3.6%	-5.3%	-14.6%
Industry	88	99	81	94	78	72	63	1.2%	-1.9%	1.5%	-1.8%	-0.8%	-1.3%
Buildings	74	85	72	79	72	66	57	1.5%	-1.7%	1.0%	-1.0%	-0.8%	-1.4%
Agriculture	8	10	15	18	16	14	10	3.1%	3.6%	1.9%	-0.9%	-1.7%	-3.1%
Transport	115	136	158	161	134	117	96	1.7%	1.5%	0.2%	-1.9%	-1.4%	-1.9%
Other	51	71	100	137	145	156	157	3.4%	3.5%	3.2%	0.6%	0.7%	0.1%
CO <sub>2</sub> captured (CCS)	0	0	0	0	7	33	69	n.s.	n.s.	n.s.	57.9%	16.4%	7.5%
Coal	0	0	0	0	6	31	49	n.s.	n.s.	n.s.	n.s.	18.0%	4.9%
Gas	0	0	0	0	1	3	4	n.s.	n.s.	n.s.	n.s.	6.6%	3.1%
Biomass	0	0	0	0	0	0	16	n.s.	n.s.	n.s.	6.2%	18.1%	54.3%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	280	385	402	520	726	850	903	3.2%	0.4%	2.6%	3.4%	1.6%	0.6%
Coal	40	39	35	33	91	112	37	0.0%	-1.1%	-0.5%	10.6%	2.1%	-10.5%
Oil	97	133	164	212	304	368	463	3.2%	2.1%	2.6%	3.7%	1.9%	2.3%
Natural gas	90	150	132	178	192	203	220	5.2%	-1.3%	3.0%	0.8%	0.6%	0.8%
Biomass	8	12	14	29	55	64	72	3.8%	2.1%	7.1%	6.8%	1.6%	1.1%
Nuclear <sup>1</sup>	19	19	24	28	35	45	44	0.0%	2.2%	1.5%	2.2%	2.7%	-0.3%
Hydro	26	31	30	34	35	37	38	1.9%	-0.2%	1.1%	0.5%	0.4%	0.4%
Other renewables	0	0	1	6	13	20	29	n.s.	42.8%	21.5%	7.7%	4.8%	3.6%
Net Imports	-67	-132	-148	-253	-448	-556	-601						
Coal	-14	-7	-12	-13	-74	-86	-7						
Oil	-17	-46	-80	-137	-246	-322	-432						
Natural gas	-36	-76	-54	-87	-103	-121	-140						
Biomass	0	0	0	-11	-20	-20	-16						
Biofuels	0	0	0	0	-1	-2	-2						
Electricity	0	-3	-2	-4	-4	-4	-4						
Primary Energy Demand <sup>2</sup>	212	252	253	267	278	294	302	1.7%	0.0%	0.5%	0.4%	0.6%	0.3%
Coal	25	32	23	21	17	26	30	2.5%	-3.3%	-1.1%	-1.8%	4.2%	1.6%
Oil	80	87	85	75	58	46	31	0.8%	-0.3%	-1.1%	-2.5%	-2.3%	-3.9%
Natural gas	54	74	79	91	90	82	80	3.2%	0.6%	1.4%	-0.1%	-0.9%	-0.2%
Biomass	8	12	14	17	35	44	56	3.7%	1.8%	2.0%	7.3%	2.5%	2.4%
Nuclear <sup>1</sup>	19	19	24	28	35	45	44	0.0%	2.2%	1.5%	2.2%	2.7%	-0.3%
Hydro	26	31	30	34	35	37	38	1.9%	-0.2%	1.1%	0.5%	0.4%	0.4%
Other renewables	0	0	1	6	13	20	29	n.s.	42.8%	21.5%	7.7%	4.8%	3.6%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	212	252	253	267	278	294	302	1.7%	0.0%	0.5%	0.4%	0.6%	0.3%
Energy for Power Generation	71	89	89	88	104	122	137	2.3%	0.0%	-0.2%	1.7%	1.7%	1.2%
Other Energy Transformation & Losses	20	20	18	19	31	37	43	-0.2%	-1.1%	0.7%	4.8%	2.0%	1.4%
Final consumption	157	185	189	207	202	205	202	1.7%	0.2%	1.0%	-0.2%	0.1%	-0.1%
Steel, Non-Met. Minerals and Chem.	11	12	11	12	9	7	6	0.8%	-1.0%	0.5%	-3.1%	-1.8%	-1.2%
Other Industry	37	44	33	39	39	39	38	1.7%	-2.9%	1.8%	0.0%	0.1%	-0.2%
Non-Energy Use	15	20	23	25	24	23	22	2.8%	1.7%	0.7%	-0.6%	-0.1%	-0.4%
Residential	29	31	33	36	37	38	39	0.7%	0.7%	0.9%	0.3%	0.2%	0.1%
Services	22	27	25	28	32	36	42	2.2%	-0.7%	1.0%	1.3%	1.4%	1.3%
Agriculture	3	4	6	7	7	8	9	2.6%	2.8%	2.0%	0.9%	0.8%	0.7%
Road	33	39	49	51	45	43	37	1.7%	2.2%	0.5%	-1.2%	-0.6%	-1.4%
Rail	2	2	2	2	2	2	2	-0.7%	0.2%	1.2%	-0.1%	-0.1%	-0.2%
Aviation	3	4	4	5	5	5	5	2.4%	-0.7%	2.5%	-0.3%	0.3%	-0.1%
Other Transport	1	2	3	2	2	2	2	0.4%	6.6%	-3.1%	0.3%	0.0%	-0.4%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Canada	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>27</b>	<b>39</b>	<b>34</b>	<b>20</b>	<b>21</b>	<b>20</b>	<b>27</b>	<b>3.9%</b>	<b>-1.3%</b>	<b>-5.1%</b>	<b>0.2%</b>	<b>-0.3%</b>	<b>2.8%</b>
Coal	20	27	19	13	9	12	14	2.9%	-3.3%	-3.5%	-3.7%	2.8%	1.3%
Oil	4	3	2	0	0	0	0	-1.5%	-4.3%	n.s.	n.s.	n.s.	n.s.
Gas	2	7	11	6	6	3	4	14.7%	4.4%	-6.5%	0.8%	-5.8%	2.3%
Biomass & Waste	1	2	2	1	5	5	9	7.8%	0.7%	-4.5%	15.2%	-1.5%	6.4%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>482</b>	<b>605</b>	<b>600</b>	<b>663</b>	<b>789</b>	<b>918</b>	<b>1 051</b>	<b>2.3%</b>	<b>-0.1%</b>	<b>1.0%</b>	<b>1.8%</b>	<b>1.5%</b>	<b>1.4%</b>
Coal	82	118	80	57	43	57	67	3.6%	-3.8%	-3.2%	-2.8%	2.9%	1.5%
of which CCS	0	0	0	0	5	35	57	n.s.	n.s.	n.s.	n.s.	21.1%	4.9%
Oil	16	15	8	0	0	0	0	-1.1%	-6.1%	n.s.	n.s.	n.s.	n.s.
Gas	10	33	52	34	39	21	27	13.2%	4.4%	-4.0%	1.4%	-6.1%	2.4%
of which CCS	0	0	0	0	2	6	9	n.s.	n.s.	n.s.	n.s.	12.5%	4.4%
Biomass & Waste	4	8	9	6	25	22	43	7.2%	1.4%	-4.5%	15.7%	-1.2%	6.9%
of which CCS	0	0	0	0	0	0	20	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	73	73	91	106	134	179	175	0.0%	2.2%	1.5%	2.4%	2.9%	-0.2%
Hydro	297	359	351	393	412	429	445	1.9%	-0.2%	1.1%	0.5%	0.4%	0.4%
Wind	0	0	9	59	120	184	256	n.s.	42.5%	20.7%	7.3%	4.4%	3.4%
Solar	0	0	0	8	16	26	37	n.s.	36.0%	37.6%	6.6%	4.9%	3.6%
Other	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	26.9%	16.7%	13.6%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>103</b>	<b>111</b>	<b>130</b>	<b>177</b>	<b>224</b>	<b>275</b>	<b>320</b>	<b>0.7%</b>	<b>1.6%</b>	<b>3.1%</b>	<b>2.4%</b>	<b>2.1%</b>	<b>1.5%</b>
Coal	19	18	14	15	14	18	21	-0.8%	-2.3%	0.9%	-0.6%	2.2%	1.5%
of which CCS	0	0	0	0	1	6	13	n.s.	n.s.	n.s.	n.s.	23.7%	8.6%
Oil	7	8	7	11	14	15	15	0.5%	-1.4%	5.5%	2.3%	0.3%	0.1%
Gas	4	7	13	24	30	32	27	5.9%	7.0%	6.4%	2.3%	0.6%	-1.5%
of which CCS	0	0	0	0	0	2	4	n.s.	n.s.	n.s.	n.s.	21.4%	8.4%
Biomass & Waste	1	1	5	3	5	9	16	2.2%	15.1%	-5.0%	6.0%	5.9%	6.2%
of which CCS	0	0	0	0	0	0	3	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	13	10	13	13	17	22	22	-2.2%	2.3%	0.6%	2.2%	3.0%	-0.2%
Hydro	59	67	75	78	82	85	88	1.3%	1.1%	0.4%	0.5%	0.4%	0.4%
Wind	0	0	4	25	49	73	100	n.s.	39.9%	20.2%	6.8%	4.1%	3.2%
Solar	0	0	0	7	13	21	30	n.s.	44.3%	37.6%	6.6%	4.9%	3.6%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	26.2%	16.1%	13.1%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>157</b>	<b>185</b>	<b>189</b>	<b>207</b>	<b>202</b>	<b>205</b>	<b>202</b>	<b>1.7%</b>	<b>0.2%</b>	<b>1.0%</b>	<b>-0.2%</b>	<b>0.1%</b>	<b>-0.1%</b>
Coal	4	5	4	4	3	4	5	0.6%	-1.4%	0.0%	-1.4%	1.6%	1.8%
Oil	69	80	92	94	78	67	53	1.6%	1.4%	0.2%	-1.8%	-1.5%	-2.3%
Gas	40	49	40	50	45	43	39	1.9%	-2.0%	2.4%	-1.0%	-0.5%	-1.0%
Electricity	36	41	41	44	53	62	71	1.4%	0.0%	0.7%	1.9%	1.6%	1.4%
Heat	1	1	0	1	2	3	4	2.5%	-5.9%	5.6%	7.2%	5.5%	4.2%
Biomass & Other	7	10	11	15	21	26	30	3.1%	1.6%	2.5%	3.7%	2.1%	1.4%
Share of Renewables <sup>3</sup> (%)	22%	24%	25%	28%	39%	48%	58%	0.6%	0.4%	1.3%	3.5%	2.0%	1.9%
<b>Industry (incl. non-energy use)</b>	<b>63</b>	<b>76</b>	<b>67</b>	<b>76</b>	<b>71</b>	<b>70</b>	<b>67</b>	<b>1.8%</b>	<b>-1.2%</b>	<b>1.2%</b>	<b>-0.6%</b>	<b>-0.2%</b>	<b>-0.4%</b>
Coal	4	5	4	4	3	4	5	0.7%	-1.4%	0.0%	-1.4%	1.6%	1.8%
Oil	18	22	27	26	22	19	15	2.0%	1.9%	-0.1%	-1.7%	-1.6%	-2.1%
Gas	20	23	16	22	19	18	16	1.5%	-3.9%	3.4%	-1.3%	-0.4%	-1.2%
Electricity	14	17	15	16	18	19	20	1.9%	-1.5%	0.8%	1.1%	0.7%	0.4%
Heat	1	1	0	1	1	1	1	2.5%	-6.6%	4.7%	-0.2%	-0.3%	-0.2%
Biomass & Other	6	8	6	7	8	8	10	3.1%	-3.1%	1.5%	1.7%	1.0%	1.7%
<b>Buildings</b>	<b>50</b>	<b>58</b>	<b>58</b>	<b>64</b>	<b>69</b>	<b>75</b>	<b>80</b>	<b>1.4%</b>	<b>0.1%</b>	<b>1.0%</b>	<b>0.7%</b>	<b>0.8%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	0	0	-3.1%	-1.1%	-8.2%	-6.0%	-8.7%	n.s.
Oil	9	9	5	5	5	5	5	0.0%	-5.0%	-0.5%	0.2%	0.1%	-0.8%
Gas	20	25	24	27	24	21	18	2.3%	-0.5%	1.5%	-1.3%	-1.1%	-1.7%
Electricity	20	23	25	26	31	36	42	1.0%	0.9%	0.6%	1.6%	1.6%	1.6%
Heat	0	0	0	0	1	2	3	4.4%	17.3%	12.7%	22.0%	8.3%	5.3%
Biomass & Other	1	2	5	6	8	10	12	2.1%	9.4%	2.1%	4.1%	2.1%	1.4%
<b>Agriculture</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>2.6%</b>	<b>2.8%</b>	<b>2.0%</b>	<b>0.9%</b>	<b>0.8%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	3	4	5	5	4	3	3.3%	4.2%	1.7%	-0.9%	-1.7%	-3.3%
Gas	0	1	1	1	1	1	1	1.6%	-0.3%	4.2%	-0.6%	-1.2%	-2.2%
Electricity	1	1	1	1	1	2	3	1.1%	-0.2%	1.3%	4.0%	3.7%	3.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	2	n.s.	n.s.	n.s.	36.4%	8.2%	5.4%
<b>Transport</b>	<b>40</b>	<b>47</b>	<b>57</b>	<b>61</b>	<b>55</b>	<b>52</b>	<b>46</b>	<b>1.6%</b>	<b>2.0%</b>	<b>0.5%</b>	<b>-1.0%</b>	<b>-0.5%</b>	<b>-1.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	40	47	56	58	47	39	31	1.6%	1.9%	0.3%	-2.1%	-1.7%	-2.5%
Gas	0	0	0	0	1	3	4	3.6%	-2.2%	22.9%	16.4%	5.6%	4.8%
Electricity	0	0	0	0	2	4	6	n.s.	n.s.	n.s.	27.2%	6.7%	3.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	1	2	4	6	6	n.s.	24.2%	7.5%	5.9%	2.9%	-0.4%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>20</b>	<b>20</b>	<b>18</b>	<b>19</b>	<b>31</b>	<b>37</b>	<b>43</b>	<b>-0.2%</b>	<b>-1.1%</b>	<b>0.7%</b>	<b>4.8%</b>	<b>2.0%</b>	<b>1.4%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Chile	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	13	15	17	19	20	21	22	1.4%	1.2%	1.0%	0.7%	0.4%	0.2%
GDP per capita (ppp, k\$'05)	7	11	15	18	22	25	29	4.9%	2.7%	2.2%	2.0%	1.5%	1.3%
GDP per capita (mer, k\$'05)	4	7	9	11	13	15	17	4.9%	2.7%	2.1%	2.0%	1.5%	1.3%
Share Value Added - Agriculture (%)	10	6	7	6	5	5	5	-3.8%	1.3%	-2.5%	-0.5%	-0.3%	-0.2%
Share Value Added - Industry (%)	39	33	39	37	35	34	33	-1.7%	1.7%	-0.5%	-0.4%	-0.3%	-0.4%
Share Value Added - Services (%)	52	61	54	57	59	60	62	1.6%	-1.2%	0.7%	0.3%	0.2%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	14	17	19	-4.2%	5.6%	-0.1%	0.9%	1.7%	1.2%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	17	26	20	23	39	59	83	4.7%	-2.5%	1.3%	5.5%	4.1%	3.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	56	71	97	106	71	35	11	2.4%	3.1%	1.0%	-3.9%	-6.8%	-11.1%
Total GHG (excl. sinks)	56	83	112	120	127	107	89	4.0%	3.0%	0.7%	0.5%	-1.7%	-1.8%
Total GHG (energy, industry, agriculture)	51	83	104	120	127	107	89	5.0%	2.2%	1.5%	0.5%	-1.7%	-1.8%
CO <sub>2</sub>	34	60	78	90	100	81	64	5.7%	2.7%	1.5%	1.0%	-2.0%	-2.3%
CH <sub>4</sub>	12	17	18	21	19	18	17	3.6%	0.6%	1.4%	-1.0%	-0.6%	-0.5%
N <sub>2</sub> O	5	7	8	10	9	8	8	3.0%	1.8%	1.5%	-1.1%	-0.8%	-0.4%
F gases	0	0	0	0	0	0	0	-8.4%	1.9%	-4.8%	n.s.	n.s.	n.s.
Total GHG from Energy and Industry	41	71	90	104	112	93	76	5.6%	2.3%	1.5%	0.8%	-1.8%	-2.0%
CO <sub>2</sub> Emissions from Fuel Comb.	31	55	72	82	91	72	54	5.7%	2.8%	1.4%	1.0%	-2.3%	-2.7%
Power generation/District heating	8	14	25	33	40	27	15	5.2%	6.4%	2.6%	2.1%	-4.0%	-5.8%
Industry	8	15	15	15	15	14	12	6.1%	0.3%	-0.4%	0.3%	-0.9%	-1.0%
Buildings	3	5	6	5	5	4	3	3.7%	1.8%	-0.4%	-1.3%	-2.3%	-2.5%
Agriculture	0	1	1	1	1	1	1	3.7%	4.5%	-0.4%	0.4%	-2.0%	-3.4%
Transport	9	17	18	21	22	20	18	6.7%	0.8%	1.4%	0.2%	-0.9%	-1.0%
Other	2	4	7	8	8	7	6	5.4%	5.1%	2.0%	0.5%	-1.7%	-1.4%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	9	23	n.s.	n.s.	n.s.	n.s.	42.5%	10.4%
Coal	0	0	0	0	0	8	19	n.s.	n.s.	n.s.	n.s.	43.4%	8.4%
Gas	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	44.5%	8.0%
Biomass	0	0	0	0	0	0	4	n.s.	n.s.	n.s.	n.s.	16.6%	48.0%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	8	8	9	16	21	30	39	0.8%	0.8%	6.0%	2.8%	3.5%	2.7%
Coal	2	0	0	2	2	3	3	-15.8%	0.0%	22.6%	1.4%	0.4%	0.7%
Oil	1	0	1	1	1	2	2	-9.3%	4.2%	3.2%	4.1%	3.3%	2.7%
Natural gas	1	2	2	3	5	8	11	1.2%	-0.2%	5.0%	6.9%	4.8%	3.6%
Biomass	3	4	5	7	8	11	14	4.6%	0.4%	4.7%	0.6%	3.1%	2.6%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	14.5%	11.6%
Hydro	1	2	2	2	3	3	3	7.6%	1.6%	1.8%	1.3%	1.3%	0.9%
Other renewables	0	0	0	1	2	4	6	n.s.	n.s.	40.9%	7.8%	6.7%	3.1%
Net Imports	6	17	22	22	22	15	9						
Coal	1	3	4	6	7	7	7						
Oil	5	10	14	14	13	10	8						
Natural gas	0	4	3	2	2	-2	-6						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	14	25	31	38	43	44	48	6.2%	2.0%	2.3%	1.1%	0.3%	0.7%
Coal	3	3	5	8	9	9	10	2.3%	3.5%	5.9%	1.5%	-0.2%	0.4%
Oil	6	10	15	15	14	11	11	5.0%	3.6%	0.0%	-0.4%	-2.3%	-0.6%
Natural gas	1	5	4	5	7	6	5	15.9%	-1.5%	0.6%	3.6%	-0.9%	-1.9%
Biomass	3	4	5	7	8	11	14	4.6%	0.4%	4.7%	0.6%	3.1%	2.6%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	14.5%	11.6%
Hydro	1	2	2	2	3	3	3	7.6%	1.6%	1.8%	1.3%	1.3%	0.9%
Other renewables	0	0	0	1	2	4	6	n.s.	n.s.	40.9%	7.8%	6.7%	3.1%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	14	25	31	38	43	44	48	6.2%	2.0%	2.3%	1.1%	0.3%	0.7%
Energy for Power Generation	3	6	10	15	18	20	23	7.2%	4.7%	4.2%	2.0%	1.0%	1.6%
Other Energy Transformation & Losses	1	2	2	3	4	4	5	6.2%	1.6%	5.6%	1.6%	0.7%	1.6%
Final consumption	11	20	24	27	30	32	34	6.2%	1.5%	1.4%	1.1%	0.5%	0.6%
Steel, Non-Met. Minerals and Chem.	0	1	1	1	1	1	1	4.1%	-0.3%	1.1%	0.0%	-0.6%	-0.3%
Other Industry	3	6	8	10	12	13	15	7.1%	2.8%	2.2%	1.7%	1.0%	1.2%
Non-Energy Use	1	2	1	1	1	1	1	10.1%	-8.2%	-2.7%	0.5%	0.0%	0.0%
Residential	3	5	5	6	6	6	6	4.5%	0.9%	0.6%	0.2%	-0.1%	0.0%
Services	0	1	1	2	2	2	2	2.7%	8.2%	1.2%	1.9%	1.0%	0.9%
Agriculture	0	0	0	0	0	0	0	4.2%	4.1%	-0.1%	1.2%	0.9%	0.7%
Road	3	5	6	7	8	8	8	6.8%	2.2%	1.8%	0.9%	0.1%	0.1%
Rail	0	0	0	0	0	0	0	0.2%	8.1%	1.1%	1.0%	0.6%	0.4%
Aviation	0	0	0	0	0	0	0	7.4%	4.8%	0.3%	0.2%	-0.2%	-0.1%
Other Transport	0	0	0	0	1	1	1	2.0%	2.3%	0.3%	1.9%	0.3%	-0.2%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Chile	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>2</b>	<b>5</b>	<b>8</b>	<b>11</b>	<b>13</b>	<b>13</b>	<b>14</b>	<b>7.1%</b>	<b>5.6%</b>	<b>3.9%</b>	<b>1.4%</b>	<b>-0.4%</b>	<b>1.3%</b>
Coal	2	2	4	6	7	7	7	2.4%	6.5%	4.7%	1.4%	-0.4%	0.2%
Oil	0	0	2	1	1	0	1	-0.4%	14.3%	-7.9%	4.6%	-10.3%	13.1%
Gas	0	2	2	2	3	3	2	38.7%	0.6%	2.8%	4.0%	-2.5%	-4.0%
Biomass & Waste	0	0	0	2	1	3	4	13.5%	1.0%	19.1%	-4.1%	7.1%	4.4%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>18</b>	<b>40</b>	<b>60</b>	<b>88</b>	<b>114</b>	<b>137</b>	<b>165</b>	<b>8.5%</b>	<b>4.2%</b>	<b>3.9%</b>	<b>2.6%</b>	<b>1.9%</b>	<b>1.9%</b>
Coal	7	8	17	29	35	34	35	2.6%	7.1%	5.6%	1.9%	-0.4%	0.2%
of which CCS	0	0	0	0	0	10	24	n.s.	n.s.	n.s.	n.s.	50.9%	8.5%
Oil	2	2	8	3	5	2	6	-0.4%	17.4%	-9.0%	4.5%	-10.3%	13.2%
Gas	0	10	11	12	18	14	10	49.4%	0.2%	1.2%	3.9%	-2.2%	-3.9%
of which CCS	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	43.7%	8.5%
Biomass & Waste	0	1	2	7	5	12	20	13.4%	9.1%	12.3%	-3.9%	9.2%	5.8%
of which CCS	0	0	0	0	0	0	6	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	9	19	22	26	30	33	37	7.6%	1.6%	1.8%	1.3%	1.3%	0.9%
Wind	0	0	0	9	16	28	33	n.s.	n.s.	36.7%	6.3%	5.9%	1.4%
Solar	0	0	0	2	6	14	24	n.s.	n.s.	n.s.	10.5%	9.0%	5.8%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	27.2%	18.3%	11.9%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>5</b>	<b>10</b>	<b>16</b>	<b>28</b>	<b>36</b>	<b>49</b>	<b>56</b>	<b>8.0%</b>	<b>4.9%</b>	<b>5.3%</b>	<b>2.8%</b>	<b>3.1%</b>	<b>1.4%</b>
Coal	1	2	2	5	6	7	6	6.5%	0.9%	6.6%	2.5%	1.3%	-1.8%
of which CCS	0	0	0	0	0	1	4	n.s.	n.s.	n.s.	n.s.	51.5%	9.7%
Oil	1	1	3	4	5	5	5	-0.9%	13.9%	3.8%	1.8%	-0.1%	-0.7%
Gas	0	3	4	4	5	4	2	43.0%	4.8%	0.2%	0.9%	-1.2%	-6.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	44.4%	9.1%
Biomass & Waste	0	0	1	1	1	2	3	4.3%	12.3%	3.8%	-7.3%	9.5%	5.8%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	2	4	5	7	8	10	10	5.8%	2.8%	3.1%	1.3%	1.3%	0.9%
Wind	0	0	0	4	7	12	13	n.s.	n.s.	36.1%	6.2%	5.7%	1.2%
Solar	0	0	0	2	4	10	17	n.s.	n.s.	n.s.	10.4%	8.4%	5.5%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.7%	11.4%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>11</b>	<b>20</b>	<b>24</b>	<b>27</b>	<b>30</b>	<b>32</b>	<b>34</b>	<b>6.2%</b>	<b>1.5%</b>	<b>1.4%</b>	<b>1.1%</b>	<b>0.5%</b>	<b>0.6%</b>
Coal	1	1	0	1	1	1	1	1.0%	-5.6%	3.9%	4.2%	1.1%	1.3%
Oil	5	9	12	13	12	10	8	5.3%	2.8%	0.8%	-0.8%	-1.7%	-1.7%
Gas	1	3	2	2	3	3	3	13.4%	-3.3%	-2.4%	3.6%	0.7%	-0.4%
Electricity	1	3	5	7	9	10	13	9.0%	4.1%	3.6%	2.6%	1.9%	1.9%
Heat	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	12.4%	6.3%	3.3%
Biomass & Other	3	4	4	5	6	7	8	4.1%	0.4%	1.7%	1.6%	1.7%	1.6%
Share of Renewables <sup>3</sup> (%)	33%	31%	27%	32%	37%	50%	61%	-0.7%	-1.4%	1.8%	1.4%	3.1%	1.9%
<b>Industry (incl. non-energy use)</b>	<b>4</b>	<b>9</b>	<b>10</b>	<b>12</b>	<b>13</b>	<b>15</b>	<b>16</b>	<b>7.5%</b>	<b>0.5%</b>	<b>1.7%</b>	<b>1.5%</b>	<b>0.9%</b>	<b>1.1%</b>
Coal	1	1	0	1	1	1	1	1.7%	-5.5%	3.9%	4.2%	1.1%	1.3%
Oil	2	2	3	3	3	2	2	3.4%	4.6%	0.5%	-1.5%	-2.6%	-2.7%
Gas	1	3	2	1	1	1	1	14.9%	-4.8%	-5.2%	2.5%	0.9%	-0.5%
Electricity	1	2	3	5	6	7	9	9.7%	3.4%	4.4%	2.5%	1.6%	1.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-0.2%	-0.3%	-0.2%
Biomass & Other	1	1	1	2	2	3	3	5.3%	-0.3%	4.0%	2.5%	2.6%	2.4%
<b>Buildings</b>	<b>4</b>	<b>5</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>4.3%</b>	<b>2.0%</b>	<b>0.7%</b>	<b>0.6%</b>	<b>0.2%</b>	<b>0.2%</b>
Coal	0	0	0	0	0	0	0	-15.5%	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	1	1	1	1	0	3.6%	1.1%	-1.3%	-3.0%	-3.3%	-3.1%
Gas	0	0	1	1	1	1	1	5.4%	4.5%	2.4%	2.0%	-1.0%	-1.8%
Electricity	0	1	2	2	2	2	3	7.8%	5.6%	1.9%	1.3%	0.8%	1.0%
Heat	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	12.6%	6.4%	3.4%
Biomass & Other	2	3	3	3	3	4	4	3.7%	0.6%	0.4%	0.4%	0.2%	0.1%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4.2%</b>	<b>4.1%</b>	<b>-0.1%</b>	<b>1.2%</b>	<b>0.9%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	0	0	-13.4%	-8.8%	-5.0%	-1.1%	-4.2%	n.s.
Oil	0	0	0	0	0	0	0	8.3%	5.0%	-0.3%	0.4%	-1.9%	-3.4%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	5.7%	-6.8%	7.3%	4.7%	7.0%	4.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.4%	6.5%
<b>Transport</b>	<b>3</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>6.4%</b>	<b>2.3%</b>	<b>1.6%</b>	<b>1.0%</b>	<b>0.1%</b>	<b>0.1%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	6	7	8	8	7	6	6.4%	2.3%	1.3%	-0.2%	-1.2%	-1.2%
Gas	0	0	0	0	0	1	1	3.5%	8.5%	21.4%	14.2%	2.5%	1.3%
Electricity	0	0	0	0	0	1	1	0.4%	7.0%	3.8%	24.1%	7.5%	3.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	12.5%	6.8%	4.7%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>6.2%</b>	<b>1.6%</b>	<b>5.6%</b>	<b>1.6%</b>	<b>0.7%</b>	<b>1.6%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Mexico	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	86	103	119	135	148	158	164	1.8%	1.4%	1.3%	0.9%	0.6%	0.4%
GDP per capita (ppp, k\$'05)	10	12	12	15	18	23	30	1.7%	0.3%	1.6%	2.3%	2.5%	2.4%
GDP per capita (mer, k\$'05)	7	8	8	9	12	15	19	1.7%	0.3%	1.5%	2.3%	2.5%	2.4%
Share Value Added - Agriculture (%)	8	3	3	3	3	3	3	-7.8%	-0.1%	-0.3%	-0.9%	-0.8%	-0.6%
Share Value Added - Industry (%)	28	36	35	35	34	33	31	2.3%	-0.3%	0.1%	-0.3%	-0.5%	-0.6%
Share Value Added - Services (%)	64	61	62	61	63	65	67	-0.5%	0.2%	-0.1%	0.2%	0.3%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	14	17	19	-4.2%	5.6%	-0.1%	0.9%	1.7%	1.2%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	17	26	20	23	39	59	83	4.7%	-2.5%	1.3%	5.5%	4.1%	3.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	505	602	737	739	624	598	562	1.8%	2.1%	0.0%	-1.7%	-0.4%	-0.6%
Total GHG (excl. sinks)	518	626	750	739	723	723	720	1.9%	1.8%	-0.1%	-0.2%	0.0%	0.0%
Total GHG (energy, industry, agriculture)	466	573	713	725	723	711	720	2.1%	2.2%	0.2%	0.0%	-0.2%	0.1%
CO <sub>2</sub>	305	394	471	504	534	523	532	2.6%	1.8%	0.7%	0.6%	-0.2%	0.2%
CH <sub>4</sub>	103	118	166	142	117	113	110	1.3%	3.4%	-1.5%	-1.9%	-0.4%	-0.2%
N <sub>2</sub> O	56	58	69	72	69	72	73	0.3%	1.7%	0.4%	-0.4%	0.4%	0.2%
F gases	1	3	8	7	3	4	5	7.9%	10.1%	-1.0%	-8.0%	2.9%	2.4%
Total GHG from Energy and Industry	373	486	621	625	631	615	622	2.7%	2.5%	0.1%	0.1%	-0.3%	0.1%
CO <sub>2</sub> Emissions from Fuel Comb.	283	359	431	460	486	468	471	2.4%	1.9%	0.7%	0.6%	-0.4%	0.1%
Power generation/District heating	63	112	122	146	187	170	161	5.9%	0.9%	1.8%	2.5%	-0.9%	-0.6%
Industry	64	62	55	67	62	69	86	-0.4%	-1.2%	2.0%	-0.7%	1.0%	2.2%
Buildings	24	31	28	26	22	19	18	2.5%	-1.1%	-0.6%	-1.9%	-1.6%	-0.6%
Agriculture	5	7	9	10	9	8	7	2.6%	2.6%	1.0%	-0.7%	-1.4%	-1.5%
Transport	83	104	148	142	130	130	129	2.3%	3.6%	-0.5%	-0.9%	0.0%	-0.1%
Other	43	43	68	69	76	73	71	0.0%	4.8%	0.1%	1.0%	-0.5%	-0.2%
CO <sub>2</sub> captured (CCS)	0	0	0	0	7	47	111	n.s.	n.s.	n.s.	n.s.	20.3%	8.9%
Coal	0	0	0	0	6	40	103	n.s.	n.s.	n.s.	n.s.	21.6%	9.9%
Gas	0	0	0	0	2	7	7	n.s.	n.s.	n.s.	n.s.	14.8%	-0.5%
Biomass	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	17.8%	14.6%	21.0%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	186	227	219	233	214	210	232	2.0%	-0.3%	0.6%	-0.8%	-0.2%	1.0%
Coal	3	6	7	8	9	15	23	6.6%	1.2%	1.2%	2.2%	4.6%	4.4%
Oil	145	170	146	130	104	64	44	1.6%	-1.5%	-1.2%	-2.1%	-4.8%	-3.6%
Natural gas	23	32	48	68	48	43	47	3.4%	4.2%	3.6%	-3.5%	-1.0%	1.0%
Biomass	9	9	8	9	16	24	28	0.4%	-0.7%	0.5%	6.0%	4.5%	1.5%
Nuclear <sup>1</sup>	1	2	2	3	9	20	31	10.8%	-3.3%	5.3%	13.5%	8.2%	4.3%
Hydro	2	3	3	3	4	4	4	3.5%	1.1%	0.8%	0.4%	0.0%	0.0%
Other renewables	4	5	6	13	24	40	55	1.5%	1.5%	8.6%	6.1%	5.0%	3.3%
Net Imports	-67	-81	-42	-30	26	71	94						
Coal	2	2	4	7	10	18	31						
Oil	-69	-80	-51	-39	-20	15	35						
Natural gas	1	-3	6	1	35	34	24						
Biomass	0	0	0	1	2	3	3						
Biofuels	0	0	0	0	0	1	2						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	119	146	177	203	241	280	326	2.1%	1.9%	1.4%	1.7%	1.5%	1.5%
Coal	5	8	10	15	19	33	53	5.5%	2.5%	3.7%	2.7%	5.4%	4.9%
Oil	76	90	95	90	84	79	79	1.8%	0.5%	-0.5%	-0.7%	-0.7%	0.0%
Natural gas	23	29	53	69	82	77	72	2.3%	6.3%	2.6%	1.8%	-0.7%	-0.7%
Biomass	9	9	8	10	17	27	31	0.4%	-0.7%	1.7%	5.7%	4.6%	1.2%
Nuclear <sup>1</sup>	1	2	2	3	9	20	31	10.8%	-3.3%	5.3%	13.5%	8.2%	4.3%
Hydro	2	3	3	3	4	4	4	3.5%	1.1%	0.8%	0.4%	0.0%	0.0%
Other renewables	4	5	6	13	24	40	55	1.5%	1.5%	8.6%	6.1%	5.0%	3.3%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	119	146	177	203	241	280	326	2.1%	1.9%	1.4%	1.7%	1.5%	1.5%
Energy for Power Generation	28	48	56	74	109	140	178	5.5%	1.5%	2.9%	3.9%	2.5%	2.4%
Other Energy Transformation & Losses	15	14	26	32	39	44	50	-1.1%	6.4%	2.3%	2.0%	1.2%	1.3%
Final consumption	84	99	114	124	135	157	180	1.6%	1.4%	0.8%	0.9%	1.5%	1.4%
Steel, Non-Met. Minerals and Chem.	15	14	12	12	11	12	14	-0.6%	-1.6%	0.1%	-1.0%	1.0%	1.2%
Other Industry	12	14	16	26	31	39	47	2.1%	1.0%	5.1%	1.9%	2.2%	1.9%
Non-Energy Use	9	10	8	7	7	9	10	0.8%	-1.9%	-2.1%	1.0%	2.0%	1.5%
Residential	16	18	18	18	18	20	21	1.4%	-0.1%	-0.2%	0.5%	0.6%	0.5%
Services	2	3	5	6	9	12	15	4.7%	3.1%	3.3%	3.3%	2.7%	2.4%
Agriculture	2	3	4	4	5	5	6	2.4%	2.2%	1.5%	1.4%	1.3%	1.2%
Road	27	34	50	49	51	58	65	2.3%	4.0%	-0.2%	0.4%	1.3%	1.1%
Rail	1	1	1	1	1	1	1	-1.0%	0.5%	1.3%	1.4%	1.7%	1.7%
Aviation	0	0	0	0	0	0	0	n.s.	1.1%	-7.9%	2.7%	3.3%	2.7%
Other Transport	0	1	1	1	1	1	1	11.4%	-5.6%	0.5%	1.5%	1.3%	0.9%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Mexico	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>21</b>	<b>38</b>	<b>45</b>	<b>55</b>	<b>72</b>	<b>76</b>	<b>88</b>	<b>6.1%</b>	<b>1.8%</b>	<b>2.0%</b>	<b>2.8%</b>	<b>0.6%</b>	<b>1.4%</b>
Coal	2	5	8	11	16	26	41	10.0%	5.3%	3.8%	3.4%	5.0%	4.5%
Oil	15	23	10	7	10	7	8	4.3%	-7.9%	-4.1%	3.8%	-3.4%	1.6%
Gas	3	9	25	34	42	36	30	9.7%	11.3%	3.0%	2.1%	-1.5%	-1.9%
Biomass & Waste	0	1	1	2	3	5	7	n.s.	4.1%	4.3%	4.7%	7.2%	2.9%
Other	0	1	1	1	1	2	2	1.4%	1.2%	3.6%	5.3%	2.7%	2.2%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>116</b>	<b>204</b>	<b>271</b>	<b>371</b>	<b>546</b>	<b>741</b>	<b>957</b>	<b>5.8%</b>	<b>2.9%</b>	<b>3.2%</b>	<b>3.9%</b>	<b>3.1%</b>	<b>2.6%</b>
Coal	8	19	33	48	73	123	196	9.6%	5.3%	3.9%	4.2%	5.4%	4.7%
of which CCS	0	0	0	0	5	44	123	n.s.	n.s.	n.s.	n.s.	25.2%	10.9%
Oil	62	94	44	28	40	29	35	4.3%	-7.4%	-4.5%	3.7%	-3.2%	1.8%
Gas	14	41	141	174	217	194	162	11.1%	13.0%	2.1%	2.2%	-1.1%	-1.8%
of which CCS	0	0	0	0	4	20	19	n.s.	n.s.	n.s.	n.s.	16.8%	-0.3%
Biomass & Waste	0	2	3	3	11	25	36	n.s.	4.9%	0.1%	14.5%	9.2%	3.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	3	8	6	10	37	83	127	10.8%	-3.3%	5.4%	14.1%	8.4%	4.3%
Hydro	23	33	37	40	42	42	42	3.5%	1.1%	0.8%	0.4%	0.0%	0.0%
Wind	0	0	1	46	73	143	189	34.2%	50.8%	44.7%	4.7%	6.9%	2.8%
Solar	0	0	0	13	38	80	140	19.9%	15.8%	n.s.	11.0%	7.6%	5.8%
Other	5	6	7	9	16	22	30	1.4%	1.2%	3.7%	5.4%	3.1%	3.3%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>27</b>	<b>42</b>	<b>62</b>	<b>98</b>	<b>136</b>	<b>210</b>	<b>272</b>	<b>4.6%</b>	<b>3.9%</b>	<b>4.6%</b>	<b>3.4%</b>	<b>4.4%</b>	<b>2.6%</b>
Coal	1	5	6	7	10	18	29	15.6%	1.7%	1.6%	4.0%	5.7%	4.9%
of which CCS	0	0	0	0	1	6	18	n.s.	n.s.	n.s.	n.s.	25.7%	11.5%
Oil	12	16	14	10	8	6	8	2.9%	-1.4%	-3.4%	-2.4%	-2.0%	3.0%
Gas	5	9	28	36	41	48	38	7.1%	11.7%	2.5%	1.5%	1.5%	-2.3%
of which CCS	0	0	0	0	1	3	3	n.s.	n.s.	n.s.	n.s.	18.6%	1.3%
Biomass & Waste	0	0	0	0	1	4	5	n.s.	1.2%	-0.9%	13.3%	9.6%	4.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	1	1	1	1	5	11	16	7.7%	0.0%	-0.1%	13.9%	8.1%	4.1%
Hydro	8	10	12	14	15	15	15	2.1%	1.8%	2.0%	0.4%	0.0%	0.0%
Wind	0	0	1	20	31	60	78	n.s.	n.s.	44.4%	4.4%	6.8%	2.6%
Solar	0	0	0	8	23	46	78	19.9%	16.4%	n.s.	10.9%	7.4%	5.5%
Other	1	1	1	1	2	3	4	2.0%	1.2%	2.9%	5.8%	2.3%	2.8%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>84</b>	<b>99</b>	<b>114</b>	<b>124</b>	<b>135</b>	<b>157</b>	<b>180</b>	<b>1.6%</b>	<b>1.4%</b>	<b>0.8%</b>	<b>0.9%</b>	<b>1.5%</b>	<b>1.4%</b>
Coal	2	2	2	4	3	5	8	0.6%	-0.1%	6.1%	-1.0%	4.2%	5.3%
Oil	51	62	74	70	62	60	59	1.9%	1.8%	-0.6%	-1.3%	-0.3%	-0.2%
Gas	14	13	13	17	18	20	23	-0.9%	-0.2%	2.6%	1.1%	0.9%	1.2%
Electricity	9	14	18	26	38	51	66	4.9%	2.5%	3.7%	3.9%	3.1%	2.6%
Heat	0	0	0	0	1	3	5	9.6%	10.4%	5.4%	20.7%	8.0%	5.1%
Biomass & Other	9	8	7	8	13	18	19	-0.4%	-1.2%	0.6%	5.1%	3.8%	0.6%
Share of Renewables <sup>3</sup> (%)	14%	12%	10%	14%	23%	34%	39%	-1.3%	-2.0%	3.3%	5.3%	3.9%	1.4%
<b>Industry (incl. non-energy use)</b>	<b>36</b>	<b>38</b>	<b>36</b>	<b>45</b>	<b>50</b>	<b>60</b>	<b>71</b>	<b>0.7%</b>	<b>-0.6%</b>	<b>2.2%</b>	<b>1.1%</b>	<b>1.9%</b>	<b>1.7%</b>
Coal	2	2	2	4	3	5	8	0.6%	-0.1%	6.1%	-1.0%	4.2%	5.3%
Oil	14	14	11	11	11	11	12	0.1%	-2.2%	-0.2%	-0.3%	0.4%	0.7%
Gas	13	12	12	14	13	14	15	-0.9%	-0.4%	1.7%	-0.5%	0.4%	1.1%
Electricity	5	9	10	15	19	25	32	6.4%	1.5%	4.0%	2.8%	2.7%	2.4%
Heat	0	0	0	0	0	0	0	n.s.	10.4%	4.9%	-0.2%	-0.3%	-0.2%
Biomass & Other	2	1	1	2	3	5	4	-3.4%	-2.9%	4.5%	7.7%	4.9%	-2.5%
<b>Buildings</b>	<b>18</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>27</b>	<b>31</b>	<b>35</b>	<b>1.8%</b>	<b>0.5%</b>	<b>0.6%</b>	<b>1.3%</b>	<b>1.4%</b>	<b>1.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	7	9	8	7	5	4	3	2.8%	-1.5%	-1.6%	-3.1%	-2.7%	-1.3%
Gas	1	1	1	2	3	3	3	-1.6%	3.4%	7.3%	2.6%	0.8%	0.8%
Electricity	3	5	7	10	13	17	21	3.2%	4.5%	3.1%	3.0%	2.6%	2.4%
Heat	0	0	0	0	1	3	5	9.6%	10.4%	5.4%	21.1%	8.1%	5.1%
Biomass & Other	7	7	6	5	6	5	3	0.3%	-0.9%	-1.6%	0.5%	-0.7%	-4.8%
<b>Agriculture</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>2.4%</b>	<b>2.2%</b>	<b>1.5%</b>	<b>1.4%</b>	<b>1.3%</b>	<b>1.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	2	3	3	3	2	2	2.6%	2.6%	1.0%	-0.7%	-1.4%	-1.5%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	1	1	1	1	1	2	2	1.7%	0.9%	2.8%	3.2%	3.1%	2.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	33.6%	8.1%	3.9%
<b>Transport</b>	<b>29</b>	<b>36</b>	<b>52</b>	<b>51</b>	<b>53</b>	<b>60</b>	<b>67</b>	<b>2.4%</b>	<b>3.7%</b>	<b>-0.2%</b>	<b>0.5%</b>	<b>1.3%</b>	<b>1.1%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	28	36	52	49	43	42	41	2.4%	3.7%	-0.6%	-1.3%	-0.2%	-0.2%
Gas	0	0	0	1	3	4	5	n.s.	7.8%	50.0%	14.8%	3.5%	1.9%
Electricity	0	0	0	1	4	8	11	3.2%	0.8%	17.8%	23.5%	5.9%	3.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	3	7	11	n.s.	n.s.	n.s.	15.5%	7.6%	4.6%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>15</b>	<b>14</b>	<b>26</b>	<b>32</b>	<b>39</b>	<b>44</b>	<b>50</b>	<b>-1.1%</b>	<b>6.4%</b>	<b>2.3%</b>	<b>2.0%</b>	<b>1.2%</b>	<b>1.3%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



United States	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	253	283	310	334	356	374	389	1.1%	0.9%	0.7%	0.6%	0.5%	0.4%
GDP per capita (ppp, k\$'05)	33	41	44	51	58	65	73	2.3%	0.7%	1.5%	1.3%	1.2%	1.1%
GDP per capita (mer, k\$'05)	33	41	44	51	58	65	73	2.3%	0.7%	1.5%	1.3%	1.2%	1.1%
Share Value Added - Agriculture (%)	2	1	1	1	1	1	1	-5.3%	0.0%	-0.2%	-0.6%	-0.5%	-0.4%
Share Value Added - Industry (%)	27	22	19	18	17	16	15	-1.7%	-1.7%	-0.4%	-0.7%	-0.7%	-0.8%
Share Value Added - Services (%)	71	76	80	81	82	83	84	0.7%	0.4%	0.1%	0.2%	0.2%	0.1%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	14	17	19	-4.2%	5.6%	-0.1%	0.9%	1.7%	1.2%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	17	26	20	23	39	59	83	4.7%	-2.5%	1.3%	5.5%	4.1%	3.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	5 339	6 274	5 798	5 319	3 618	3 195	2 738	1.6%	-0.8%	-0.9%	-3.8%	-1.2%	-1.5%
Total GHG (excl. sinks)	6 162	6 958	6 756	6 188	4 403	3 862	3 380	1.2%	-0.3%	-0.9%	-3.3%	-1.3%	-1.3%
Total GHG (energy, industry, agriculture)	6 162	6 958	6 756	6 188	4 403	3 862	3 380	1.2%	-0.3%	-0.9%	-3.3%	-1.3%	-1.3%
CO <sub>2</sub>	5 044	5 849	5 622	5 174	3 613	3 061	2 596	1.5%	-0.4%	-0.8%	-3.5%	-1.6%	-1.6%
CH <sub>4</sub>	633	588	581	472	339	335	321	-0.7%	-0.1%	-2.0%	-3.3%	-0.1%	-0.4%
N <sub>2</sub> O	395	384	404	399	385	390	391	-0.3%	0.5%	-0.1%	-0.4%	0.1%	0.0%
F gases	90	136	150	142	67	75	72	4.2%	1.0%	-0.5%	-7.3%	1.1%	-0.3%
Total GHG from Energy and Industry	5 688	6 483	6 222	5 670	3 905	3 353	2 872	1.3%	-0.4%	-0.9%	-3.7%	-1.5%	-1.5%
CO <sub>2</sub> Emissions from Fuel Comb.	4 915	5 715	5 497	5 046	3 500	2 954	2 496	1.5%	-0.4%	-0.9%	-3.6%	-1.7%	-1.7%
Power generation/District heating	1 866	2 372	2 332	1 786	1 057	807	620	2.4%	-0.2%	-2.6%	-5.1%	-2.7%	-2.6%
Industry	670	638	525	535	416	392	355	-0.5%	-1.9%	0.2%	-2.5%	-0.6%	-1.0%
Buildings	544	602	545	562	447	395	326	1.0%	-1.0%	0.3%	-2.3%	-1.2%	-1.9%
Agriculture	46	45	53	57	44	34	23	-0.2%	1.8%	0.7%	-2.6%	-2.6%	-3.6%
Transport	1 424	1 713	1 677	1 652	1 189	1 036	940	1.9%	-0.2%	-0.1%	-3.2%	-1.4%	-1.0%
Other	366	346	364	453	347	291	232	-0.6%	0.5%	2.2%	-2.6%	-1.8%	-2.2%
CO <sub>2</sub> captured (CCS)	0	0	0	0	72	287	702	n.s.	n.s.	n.s.	n.s.	14.8%	9.4%
Coal	0	0	0	0	42	213	515	n.s.	n.s.	n.s.	n.s.	17.8%	9.2%
Gas	0	0	0	0	31	70	105	n.s.	n.s.	n.s.	n.s.	8.5%	4.2%
Biomass	0	0	0	0	0	4	82	n.s.	n.s.	n.s.	0.3%	56.6%	36.3%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	1 671	1 730	1 813	2 037	2 041	2 294	2 567	0.4%	0.5%	1.2%	0.0%	1.2%	1.1%
Coal	529	575	557	410	377	612	833	0.8%	-0.3%	-3.0%	-0.8%	5.0%	3.1%
Oil	440	381	373	518	470	392	345	-1.4%	-0.2%	3.4%	-1.0%	-1.8%	-1.3%
Natural gas	419	448	500	681	522	476	491	0.7%	1.1%	3.1%	-2.6%	-0.9%	0.3%
Biomass	82	76	112	108	157	181	237	-0.8%	3.9%	-0.4%	3.8%	1.4%	2.7%
Nuclear <sup>1</sup>	162	211	222	212	333	384	377	2.7%	0.5%	-0.4%	4.6%	1.4%	-0.2%
Hydro	25	24	25	25	26	26	26	-0.3%	0.2%	0.2%	0.3%	0.0%	0.1%
Other renewables	14	15	25	82	157	224	258	0.3%	5.4%	12.8%	6.7%	3.6%	1.4%
Net Imports	292	559	441	263	112	-92	-298						
Coal	-62	-34	-49	-107	-203	-410	-592						
Oil	332	490	433	248	102	101	102						
Natural gas	21	100	56	86	79	37	-4						
Biomass	0	0	0	29	121	170	189						
Biofuels	0	0	-1	3	8	5	2						
Electricity	0	3	2	4	4	4	4						
Primary Energy Demand <sup>2</sup>	1 962	2 290	2 254	2 300	2 153	2 201	2 269	1.6%	-0.2%	0.2%	-0.7%	0.2%	0.3%
Coal	466	542	508	303	174	202	241	1.5%	-0.6%	-5.0%	-5.4%	1.5%	1.8%
Oil	772	871	805	767	572	493	447	1.2%	-0.8%	-0.5%	-2.9%	-1.5%	-1.0%
Natural gas	441	548	556	766	600	513	487	2.2%	0.2%	3.3%	-2.4%	-1.6%	-0.5%
Biomass	82	76	112	137	278	351	426	-0.8%	3.9%	2.0%	7.3%	2.3%	2.0%
Nuclear <sup>1</sup>	162	211	222	212	333	384	377	2.7%	0.5%	-0.4%	4.6%	1.4%	-0.2%
Hydro	25	24	25	25	26	26	26	-0.3%	0.2%	0.2%	0.3%	0.0%	0.1%
Other renewables	14	15	25	82	157	224	258	0.3%	5.4%	12.8%	6.7%	3.6%	1.4%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	1 962	2 290	2 254	2 300	2 153	2 201	2 269	1.6%	-0.2%	0.2%	-0.7%	0.2%	0.3%
Energy for Power Generation	754	931	957	923	958	1 062	1 181	2.1%	0.3%	-0.4%	0.4%	1.0%	1.1%
Other Energy Transformation & Losses	137	132	166	229	254	256	262	-0.3%	2.3%	3.3%	1.0%	0.1%	0.2%
Final consumption	1 300	1 538	1 489	1 529	1 390	1 400	1 406	1.7%	-0.3%	0.3%	-0.9%	0.1%	0.0%
Steel, Non-Met. Minerals and Chem.	127	152	97	92	70	64	61	1.8%	-4.4%	-0.6%	-2.7%	-0.8%	-0.5%
Other Industry	181	185	169	197	188	191	189	0.2%	-0.9%	1.6%	-0.5%	0.1%	-0.1%
Non-Energy Use	119	153	135	120	116	120	120	2.5%	-1.2%	-1.2%	-0.3%	0.4%	0.0%
Residential	224	265	268	278	259	264	263	1.7%	0.1%	0.4%	-0.7%	0.2%	0.0%
Services	157	193	217	247	255	282	305	2.1%	1.2%	1.3%	0.3%	1.0%	0.8%
Agriculture	14	14	18	20	21	22	23	-0.2%	2.2%	1.4%	0.5%	0.4%	0.3%
Road	397	493	522	496	397	369	358	2.2%	0.6%	-0.5%	-2.2%	-0.7%	-0.3%
Rail	11	10	9	13	14	14	15	-0.5%	-1.3%	3.9%	0.4%	0.4%	0.3%
Aviation	64	68	49	56	60	63	63	0.7%	-3.2%	1.4%	0.7%	0.5%	0.0%
Other Transport	6	4	4	9	10	10	10	-4.3%	0.5%	7.8%	0.6%	0.4%	-0.1%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

United States	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>554</b>	<b>681</b>	<b>686</b>	<b>604</b>	<b>442</b>	<b>428</b>	<b>520</b>	<b>2.1%</b>	<b>0.1%</b>	<b>-1.3%</b>	<b>-3.1%</b>	<b>-0.3%</b>	<b>2.0%</b>
Coal	392	492	469	261	136	149	169	2.3%	-0.5%	-5.7%	-6.3%	0.9%	1.3%
Oil	27	30	11	16	11	7	21	0.8%	-9.6%	4.3%	-3.6%	-4.7%	11.7%
Gas	93	137	185	298	230	183	194	3.9%	3.1%	4.9%	-2.5%	-2.3%	0.6%
Biomass & Waste	40	21	20	25	59	84	129	-6.0%	-0.5%	2.1%	9.0%	3.5%	4.4%
Other	1	1	2	4	5	7	6	-0.9%	1.9%	9.4%	3.7%	2.0%	-0.2%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>3 211</b>	<b>4 053</b>	<b>4 372</b>	<b>4 607</b>	<b>4 983</b>	<b>5 643</b>	<b>6 241</b>	<b>2.4%</b>	<b>0.8%</b>	<b>0.5%</b>	<b>0.8%</b>	<b>1.3%</b>	<b>1.0%</b>
Coal	1 700	2 129	1 994	1 115	589	657	781	2.3%	-0.7%	-5.7%	-6.2%	1.1%	1.8%
of which CCS	0	0	0	0	38	216	567	n.s.	n.s.	n.s.	n.s.	19.0%	10.1%
Oil	131	118	48	68	48	30	92	-1.0%	-8.6%	3.5%	-3.5%	-4.5%	11.8%
Gas	382	634	1 018	1 701	1 377	1 107	1 036	5.2%	4.8%	5.3%	-2.1%	-2.2%	-0.7%
of which CCS	0	0	0	0	80	197	299	n.s.	n.s.	n.s.	n.s.	9.5%	4.3%
Biomass & Waste	79	72	75	95	255	374	604	-0.9%	0.5%	2.3%	10.4%	3.9%	4.9%
of which CCS	0	0	0	0	0	0	73	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	612	798	839	803	1 297	1 523	1 508	2.7%	0.5%	-0.4%	4.9%	1.6%	-0.1%
Hydro	289	280	286	292	300	301	304	-0.3%	0.2%	0.2%	0.3%	0.0%	0.1%
Wind	3	6	88	422	889	1 189	1 132	6.3%	31.5%	17.0%	7.7%	2.9%	-0.5%
Solar	1	1	6	68	164	383	699	0.6%	24.1%	27.1%	9.3%	8.8%	6.2%
Other	16	15	18	43	63	79	86	-0.9%	1.9%	9.4%	3.8%	2.3%	0.8%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>778</b>	<b>890</b>	<b>1 041</b>	<b>1 118</b>	<b>1 384</b>	<b>1 632</b>	<b>1 604</b>	<b>1.4%</b>	<b>1.6%</b>	<b>0.7%</b>	<b>2.2%</b>	<b>1.7%</b>	<b>-0.2%</b>
Coal	271	321	319	208	119	116	107	1.7%	-0.1%	-4.2%	-5.5%	-0.2%	-0.8%
of which CCS	0	0	0	0	5	31	77	n.s.	n.s.	n.s.	n.s.	19.6%	9.6%
Oil	82	130	56	28	24	21	20	4.7%	-8.1%	-6.8%	-1.4%	-1.3%	-0.8%
Gas	214	221	407	438	453	410	217	0.3%	6.3%	0.7%	0.3%	-1.0%	-6.1%
of which CCS	0	0	0	0	10	30	41	n.s.	n.s.	n.s.	n.s.	11.3%	3.0%
Biomass & Waste	11	15	12	13	36	55	81	3.2%	-2.6%	1.1%	10.7%	4.3%	3.9%
of which CCS	0	0	0	0	0	0	9	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	102	98	101	99	159	187	185	-0.4%	0.3%	-0.3%	4.9%	1.6%	-0.1%
Hydro	92	99	101	103	106	106	107	0.7%	0.2%	0.2%	0.3%	0.0%	0.1%
Wind	2	2	39	182	377	495	457	4.5%	32.3%	16.6%	7.6%	2.8%	-0.8%
Solar	1	1	4	43	102	232	417	1.3%	17.0%	25.8%	9.1%	8.6%	6.0%
Other	3	3	2	6	8	9	12	0.5%	-1.5%	9.0%	3.1%	1.8%	2.8%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>1 300</b>	<b>1 538</b>	<b>1 489</b>	<b>1 529</b>	<b>1 390</b>	<b>1 400</b>	<b>1 406</b>	<b>1.7%</b>	<b>-0.3%</b>	<b>0.3%</b>	<b>-0.9%</b>	<b>0.1%</b>	<b>0.0%</b>
Coal	58	39	31	24	19	25	32	-3.8%	-2.4%	-2.4%	-2.1%	2.7%	2.5%
Oil	683	793	761	709	532	465	410	1.5%	-0.4%	-0.7%	-2.8%	-1.3%	-1.3%
Gas	288	345	295	345	273	248	215	1.8%	-1.6%	1.6%	-2.3%	-1.0%	-1.4%
Electricity	226	301	326	346	374	424	471	2.9%	0.8%	0.6%	0.8%	1.3%	1.1%
Heat	2	7	8	9	19	29	42	11.3%	1.3%	1.2%	7.6%	4.2%	3.7%
Biomass & Other	43	52	69	95	171	209	236	2.1%	2.8%	3.3%	6.0%	2.0%	1.2%
Share of Renewables <sup>3</sup> (%)	6%	6%	8%	12%	28%	37%	44%	-0.4%	2.8%	4.3%	8.8%	3.0%	1.8%
<b>Industry (incl. non-energy use)</b>	<b>427</b>	<b>490</b>	<b>402</b>	<b>409</b>	<b>374</b>	<b>375</b>	<b>370</b>	<b>1.4%</b>	<b>-2.0%</b>	<b>0.2%</b>	<b>-0.9%</b>	<b>0.0%</b>	<b>-0.1%</b>
Coal	53	37	29	23	19	25	32	-3.6%	-2.3%	-2.2%	-1.9%	2.8%	2.5%
Oil	147	160	150	121	109	100	87	0.8%	-0.6%	-2.2%	-1.0%	-0.8%	-1.4%
Gas	124	155	111	142	107	97	85	2.3%	-3.3%	2.5%	-2.8%	-1.0%	-1.4%
Electricity	75	98	74	79	78	79	77	2.8%	-2.7%	0.5%	-0.1%	0.2%	-0.2%
Heat	0	4	5	5	5	5	5	n.s.	2.2%	-0.7%	-0.2%	-0.3%	-0.2%
Biomass & Other	29	36	32	39	56	69	84	2.2%	-1.1%	2.0%	3.6%	2.1%	2.0%
<b>Buildings</b>	<b>381</b>	<b>458</b>	<b>485</b>	<b>525</b>	<b>514</b>	<b>546</b>	<b>568</b>	<b>1.8%</b>	<b>0.6%</b>	<b>0.8%</b>	<b>-0.2%</b>	<b>0.6%</b>	<b>0.4%</b>
Coal	5	2	2	1	0	0	0	-7.0%	-3.8%	-6.9%	-10.3%	-10.6%	-13.5%
Oil	45	48	36	32	35	37	33	0.5%	-2.8%	-1.1%	0.9%	0.5%	-1.0%
Gas	164	189	182	196	143	119	94	1.5%	-0.4%	0.7%	-3.1%	-1.8%	-2.3%
Electricity	152	202	251	263	266	297	329	2.9%	2.2%	0.5%	0.1%	1.1%	1.0%
Heat	2	3	3	4	14	24	37	1.7%	-0.2%	4.1%	12.8%	5.3%	4.3%
Biomass & Other	14	13	12	29	55	68	74	-0.3%	-0.7%	8.9%	6.6%	2.2%	0.8%
<b>Agriculture</b>	<b>14</b>	<b>14</b>	<b>18</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>-0.2%</b>	<b>2.2%</b>	<b>1.4%</b>	<b>0.5%</b>	<b>0.4%</b>	<b>0.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	14	14	16	17	13	10	7	-0.2%	1.1%	0.8%	-2.6%	-2.7%	-3.6%
Gas	0	0	1	1	1	1	1	n.s.	n.s.	-0.8%	-1.7%	-1.7%	-2.4%
Electricity	0	0	0	0	1	3	4	n.s.	n.s.	n.s.	20.6%	6.1%	4.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	2	6	9	11	n.s.	n.s.	15.8%	13.2%	4.4%	2.8%
<b>Transport</b>	<b>477</b>	<b>576</b>	<b>584</b>	<b>575</b>	<b>481</b>	<b>457</b>	<b>446</b>	<b>1.9%</b>	<b>0.1%</b>	<b>-0.2%</b>	<b>-1.8%</b>	<b>-0.5%</b>	<b>-0.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	477	572	559	540	375	318	283	1.8%	-0.2%	-0.4%	-3.6%	-1.6%	-1.2%
Gas	0	0	1	6	22	30	35	n.s.	10.2%	24.1%	14.4%	3.2%	1.6%
Electricity	0	0	1	4	29	45	61	0.7%	3.6%	20.8%	23.0%	4.7%	3.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	3	24	26	55	63	67	n.s.	22.5%	0.7%	7.9%	1.3%	0.6%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>137</b>	<b>132</b>	<b>166</b>	<b>229</b>	<b>254</b>	<b>256</b>	<b>262</b>	<b>-0.3%</b>	<b>2.3%</b>	<b>3.3%</b>	<b>1.0%</b>	<b>0.1%</b>	<b>0.2%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Rest Central America	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	63	74	84	93	102	109	113	1.6%	1.3%	1.1%	0.9%	0.6%	0.4%
GDP per capita (ppp, k\$'05)	3	4	5	6	8	10	13	3.2%	2.7%	2.4%	2.8%	2.9%	2.8%
GDP per capita (mer, k\$'05)	3	3	4	5	6	8	11	1.7%	1.7%	1.9%	2.8%	2.9%	2.8%
Share Value Added - Agriculture (%)	8	5	6	5	4	3	3	-3.9%	0.3%	-1.6%	-2.0%	-1.6%	-1.2%
Share Value Added - Industry (%)	26	30	31	33	32	31	30	1.4%	0.6%	0.4%	-0.2%	-0.2%	-0.3%
Share Value Added - Services (%)	66	65	63	63	64	65	67	-0.2%	-0.3%	0.0%	0.2%	0.2%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	14	17	19	-4.2%	5.6%	-0.1%	0.9%	1.7%	1.2%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	17	26	20	23	39	59	83	4.7%	-2.5%	1.3%	5.5%	4.1%	3.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	287	304	341	408	445	409	345	0.6%	1.2%	1.8%	0.9%	-0.8%	-1.7%
Total GHG (excl. sinks)	300	339	368	408	445	438	446	1.2%	0.8%	1.0%	0.9%	-0.2%	0.2%
Total GHG (energy, industry, agriculture)	173	213	272	326	391	438	446	2.1%	2.5%	1.8%	1.8%	1.2%	0.2%
CO <sub>2</sub>	100	137	182	224	273	324	337	3.3%	2.9%	2.1%	2.0%	1.7%	0.4%
CH <sub>4</sub>	48	51	64	72	83	79	75	0.6%	2.3%	1.1%	1.4%	-0.4%	-0.5%
N <sub>2</sub> O	25	24	24	28	32	33	30	-0.7%	0.2%	1.4%	1.4%	0.2%	-0.7%
F gases	0	0	1	2	3	2	3	n.s.	16.9%	3.5%	4.0%	-2.2%	2.2%
Total GHG from Energy and Industry	122	164	222	270	327	375	389	3.0%	3.1%	2.0%	1.9%	1.4%	0.4%
CO <sub>2</sub> Emissions from Fuel Comb.	90	122	157	193	235	279	286	3.1%	2.6%	2.1%	2.0%	1.7%	0.3%
Power generation/District heating	23	37	52	53	64	83	81	4.7%	3.5%	0.3%	1.9%	2.6%	-0.2%
Industry	26	31	41	62	81	96	103	2.0%	2.7%	4.3%	2.7%	1.7%	0.7%
Buildings	8	9	9	8	9	10	10	0.8%	-0.2%	-0.6%	0.7%	1.7%	-0.2%
Agriculture	2	1	1	1	1	1	1	-1.6%	-4.4%	-0.7%	1.2%	1.0%	0.2%
Transport	20	32	40	47	52	56	60	4.7%	2.5%	1.6%	0.9%	0.8%	0.5%
Other	11	12	15	21	27	32	31	1.1%	1.8%	3.8%	2.5%	1.5%	-0.2%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	1	13	n.s.	n.s.	n.s.	n.s.	n.s.	28.3%
Coal	0	0	0	0	0	1	13	n.s.	n.s.	n.s.	n.s.	n.s.	29.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	37.2%	12.5%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	31.6%	4.2%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	33	43	70	62	58	68	83	2.7%	5.1%	-1.2%	-0.7%	1.6%	2.0%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	9	11	11	10	14	17	18	2.4%	0.3%	-0.9%	3.2%	1.7%	0.9%
Natural gas	4	13	38	17	2	3	4	11.6%	11.1%	-7.9%	-19.4%	3.7%	2.4%
Biomass	18	16	16	25	23	26	31	-1.5%	0.5%	4.3%	-0.6%	1.0%	1.7%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.6%	15.7%
Hydro	1	1	2	2	2	2	2	2.8%	3.4%	0.7%	0.8%	0.2%	0.4%
Other renewables	1	2	3	8	16	20	28	9.2%	6.1%	10.7%	6.8%	2.1%	3.3%
Net Imports	18	20	9	41	72	87	96						
Coal	0	0	2	3	10	20	26						
Oil	17	23	25	27	23	20	21						
Natural gas	0	-4	-18	17	44	50	52						
Biomass	0	0	0	-7	-4	-4	-4						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	51	62	79	103	130	154	178	2.0%	2.4%	2.6%	2.4%	1.8%	1.5%
Coal	0	0	2	3	10	20	26	5.2%	15.5%	7.5%	11.3%	7.7%	2.8%
Oil	26	34	36	37	36	37	39	2.8%	0.6%	0.2%	-0.2%	0.1%	0.5%
Natural gas	5	9	20	34	46	53	56	6.6%	8.2%	5.5%	3.1%	1.5%	0.5%
Biomass	18	16	16	18	19	22	27	-1.5%	0.5%	1.1%	0.7%	1.2%	2.2%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.6%	15.7%
Hydro	1	1	2	2	2	2	2	2.8%	3.4%	0.7%	0.8%	0.2%	0.4%
Other renewables	1	2	3	8	16	20	28	9.2%	6.1%	10.7%	6.8%	2.1%	3.3%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	51	62	79	103	130	154	178	2.0%	2.4%	2.6%	2.4%	1.8%	1.5%
Energy for Power Generation	11	16	24	32	43	51	62	4.3%	4.0%	2.8%	3.1%	1.6%	2.0%
Other Energy Transformation & Losses	6	6	6	9	12	17	21	-0.5%	-0.5%	4.6%	3.2%	3.0%	2.1%
Final consumption	38	45	56	72	89	108	126	1.8%	2.2%	2.5%	2.2%	2.0%	1.5%
Steel, Non-Met. Minerals and Chem.	0	1	1	5	9	9	8	6.4%	4.9%	16.8%	4.6%	0.8%	-1.2%
Other Industry	14	12	11	15	18	23	28	-0.9%	-1.0%	2.7%	2.0%	2.5%	2.0%
Non-Energy Use	3	6	11	15	20	26	32	8.1%	6.6%	3.0%	3.0%	2.7%	2.1%
Residential	11	12	16	16	17	19	20	1.4%	2.5%	0.4%	0.4%	0.8%	0.5%
Services	2	2	3	4	5	7	9	1.8%	4.1%	1.8%	3.1%	3.3%	2.5%
Agriculture	1	1	0	1	1	1	1	-1.3%	-1.6%	2.5%	1.5%	1.6%	1.5%
Road	7	11	13	15	19	22	26	3.8%	1.5%	1.9%	1.9%	1.9%	1.6%
Rail	0	0	0	0	0	0	0	-8.6%	10.0%	3.0%	2.1%	1.9%	1.6%
Aviation	0	0	0	0	0	1	1	4.7%	9.2%	1.2%	3.6%	3.5%	2.9%
Other Transport	1	0	0	0	1	1	1	-6.3%	1.5%	-0.7%	3.1%	2.5%	2.0%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest Central America	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>9</b>	<b>13</b>	<b>19</b>	<b>21</b>	<b>25</b>	<b>28</b>	<b>31</b>	<b>4.0%</b>	<b>3.8%</b>	<b>1.0%</b>	<b>1.4%</b>	<b>1.4%</b>	<b>1.1%</b>
Coal	0	0	1	2	6	13	15	33.6%	14.9%	10.8%	11.2%	7.6%	1.4%
Oil	6	10	13	10	8	6	5	4.4%	2.5%	-1.9%	-2.2%	-4.0%	-1.3%
Gas	1	2	4	5	5	6	7	5.6%	6.8%	3.0%	1.2%	1.0%	0.7%
Biomass & Waste	1	1	2	3	3	2	4	-1.9%	5.7%	5.1%	0.0%	-2.8%	4.4%
Other	0	0	0	1	1	1	2	9.1%	5.5%	9.4%	6.0%	0.2%	1.9%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>43</b>	<b>68</b>	<b>94</b>	<b>118</b>	<b>161</b>	<b>229</b>	<b>312</b>	<b>4.8%</b>	<b>3.3%</b>	<b>2.2%</b>	<b>3.1%</b>	<b>3.6%</b>	<b>3.1%</b>
Coal	0	1	3	9	31	67	78	33.5%	14.7%	12.0%	12.5%	8.1%	1.5%
of which CCS	0	0	0	0	0	0	12	n.s.	n.s.	n.s.	n.s.	n.s.	45.9%
Oil	24	40	47	46	36	24	21	5.4%	1.7%	-0.4%	-2.2%	-4.1%	-1.2%
Gas	4	7	14	20	23	28	33	6.6%	7.4%	3.6%	1.4%	1.9%	1.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	21.2%
Biomass & Waste	2	2	3	4	4	6	17	-0.1%	4.7%	2.3%	0.0%	4.5%	10.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	13	17	23	25	27	27	28	2.8%	3.4%	0.7%	0.8%	0.2%	0.4%
Wind	0	0	1	4	14	33	59	n.s.	11.9%	22.4%	13.0%	8.7%	5.9%
Solar	0	0	0	2	11	29	57	n.s.	-3.4%	n.s.	18.7%	10.0%	7.1%
Other	1	2	3	8	14	15	19	9.1%	5.5%	9.4%	6.1%	0.5%	2.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>13</b>	<b>19</b>	<b>25</b>	<b>32</b>	<b>43</b>	<b>66</b>	<b>96</b>	<b>3.6%</b>	<b>2.9%</b>	<b>2.5%</b>	<b>3.3%</b>	<b>4.2%</b>	<b>3.8%</b>
Coal	0	0	0	1	4	9	12	5.6%	1.1%	10.3%	12.7%	8.5%	2.6%
of which CCS	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	n.s.	46.8%
Oil	8	11	15	16	14	11	8	3.6%	2.6%	0.9%	-1.4%	-1.9%	-3.2%
Gas	1	2	3	3	4	5	7	4.3%	3.6%	1.7%	0.8%	2.5%	3.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	21.8%
Biomass & Waste	0	1	1	1	1	1	3	6.1%	5.1%	0.8%	-2.2%	2.2%	10.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	3	4	5	6	6	6	7	2.3%	2.9%	1.3%	0.8%	0.2%	0.4%
Wind	0	0	0	2	6	14	24	n.s.	14.9%	21.8%	12.7%	8.6%	5.8%
Solar	0	0	0	1	7	17	33	n.s.	-3.4%	n.s.	18.5%	9.8%	6.7%
Other	0	0	1	1	2	2	3	9.3%	2.4%	8.9%	5.1%	1.0%	1.9%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>38</b>	<b>45</b>	<b>56</b>	<b>72</b>	<b>89</b>	<b>108</b>	<b>126</b>	<b>1.8%</b>	<b>2.2%</b>	<b>2.5%</b>	<b>2.2%</b>	<b>2.0%</b>	<b>1.5%</b>
Coal	0	0	1	1	3	6	9	-1.0%	12.3%	6.9%	10.3%	7.1%	4.6%
Oil	17	21	22	25	26	29	32	2.2%	0.8%	0.9%	0.6%	1.1%	0.8%
Gas	3	6	12	22	31	37	38	8.1%	7.0%	6.1%	3.5%	1.6%	0.4%
Electricity	3	5	7	8	12	17	22	4.6%	3.7%	2.2%	3.2%	3.7%	3.1%
Heat	0	0	0	1	2	2	3	n.s.	n.s.	n.s.	5.8%	2.2%	2.6%
Biomass & Other	15	14	14	14	15	18	21	-1.2%	0.4%	0.2%	0.5%	1.7%	1.8%
Share of Renewables <sup>3</sup> (%)	45%	36%	35%	31%	32%	36%	45%	-2.1%	-0.5%	-1.1%	0.3%	1.2%	2.1%
<b>Industry (incl. non-energy use)</b>	<b>17</b>	<b>19</b>	<b>23</b>	<b>35</b>	<b>47</b>	<b>58</b>	<b>68</b>	<b>1.3%</b>	<b>2.1%</b>	<b>4.1%</b>	<b>2.9%</b>	<b>2.3%</b>	<b>1.6%</b>
Coal	0	0	1	1	3	6	9	-1.0%	12.3%	6.9%	10.3%	7.1%	4.6%
Oil	7	7	6	7	8	11	13	0.5%	-1.0%	1.1%	1.5%	2.7%	2.0%
Gas	3	6	12	21	28	32	32	8.0%	7.2%	5.7%	2.9%	1.2%	0.1%
Electricity	1	2	2	3	5	6	9	4.5%	2.7%	3.8%	3.4%	3.5%	3.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	6	4	2	2	2	3	5	-3.7%	-6.2%	1.1%	0.1%	3.7%	3.8%
<b>Buildings</b>	<b>12</b>	<b>14</b>	<b>19</b>	<b>20</b>	<b>22</b>	<b>25</b>	<b>28</b>	<b>1.5%</b>	<b>2.7%</b>	<b>0.6%</b>	<b>1.0%</b>	<b>1.4%</b>	<b>1.1%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	3	3	2	1	1	1	0.4%	-0.1%	-2.8%	-3.6%	-1.9%	-2.8%
Gas	0	0	0	1	2	3	3	11.9%	-2.4%	18.3%	8.8%	4.4%	0.9%
Electricity	2	3	4	5	6	8	10	4.8%	4.1%	1.1%	1.7%	2.7%	2.5%
Heat	0	0	0	1	2	2	3	n.s.	n.s.	n.s.	5.8%	2.2%	2.6%
Biomass & Other	8	9	12	11	11	12	12	0.8%	3.0%	-0.2%	-0.1%	0.3%	0.2%
<b>Agriculture</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>-1.3%</b>	<b>-1.6%</b>	<b>2.5%</b>	<b>1.5%</b>	<b>1.6%</b>	<b>1.5%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	0	0	0	0	0	0	-1.6%	-4.4%	-0.7%	1.2%	1.0%	0.2%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	1	-1.4%	10.5%	6.3%	2.0%	2.1%	2.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	3.1%	-2.7%	6.0%	0.0%	0.9%	3.1%
<b>Transport</b>	<b>8</b>	<b>11</b>	<b>13</b>	<b>16</b>	<b>20</b>	<b>24</b>	<b>28</b>	<b>3.2%</b>	<b>1.7%</b>	<b>1.8%</b>	<b>1.9%</b>	<b>2.0%</b>	<b>1.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	7	11	13	15	16	17	17	4.3%	2.2%	1.5%	0.5%	0.5%	0.2%
Gas	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	17.6%	5.3%	3.6%
Electricity	0	0	0	0	1	2	4	-0.7%	10.0%	8.2%	34.5%	9.0%	4.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	1	0	1	1	3	4	-4.9%	-12.0%	8.6%	9.7%	7.3%	4.9%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>9</b>	<b>12</b>	<b>17</b>	<b>21</b>	<b>-0.5%</b>	<b>-0.5%</b>	<b>4.6%</b>	<b>3.2%</b>	<b>3.0%</b>	<b>2.1%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Rest South America	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	102	122	140	158	173	184	192	1.8%	1.4%	1.2%	0.9%	0.6%	0.4%
GDP per capita (ppp, k\$'05)	6	7	9	11	16	22	30	0.9%	2.6%	2.8%	3.3%	3.4%	3.2%
GDP per capita (mer, k\$'05)	3	3	4	5	7	10	14	0.8%	2.5%	2.8%	3.3%	3.4%	3.2%
Share Value Added - Agriculture (%)	10	6	7	5	5	4	4	-3.8%	1.3%	-3.1%	-1.2%	-0.9%	-0.6%
Share Value Added - Industry (%)	39	33	39	37	36	34	31	-1.7%	1.7%	-0.4%	-0.4%	-0.6%	-0.8%
Share Value Added - Services (%)	52	61	54	57	60	62	65	1.6%	-1.2%	0.7%	0.4%	0.4%	0.4%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	14	17	19	-4.2%	5.6%	-0.1%	0.9%	1.7%	1.2%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	17	26	20	23	39	59	83	4.7%	-2.5%	1.3%	5.5%	4.1%	3.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	888	933	1 148	1 152	1 272	838	181	0.5%	2.1%	0.0%	1.0%	-4.1%	-14.2%
Total GHG (excl. sinks)	907	1 004	1 208	1 152	1 272	1 162	1 051	1.0%	1.9%	-0.5%	1.0%	-0.9%	-1.0%
Total GHG (energy, industry, agriculture)	431	523	687	786	994	1 082	983	2.0%	2.8%	1.4%	2.4%	0.9%	-1.0%
CO <sub>2</sub>	222	284	404	491	669	790	720	2.5%	3.6%	2.0%	3.1%	1.7%	-0.9%
CH <sub>4</sub>	152	182	210	216	238	208	184	1.8%	1.4%	0.3%	1.0%	-1.4%	-1.2%
N <sub>2</sub> O	53	55	70	74	80	79	72	0.4%	2.3%	0.6%	0.8%	-0.1%	-0.9%
F gases	4	2	3	4	6	5	6	-8.2%	8.2%	2.9%	3.7%	-2.8%	1.8%
Total GHG from Energy and Industry	282	357	489	582	778	877	805	2.4%	3.2%	1.8%	2.9%	1.2%	-0.9%
CO <sub>2</sub> Emissions from Fuel Comb.	204	257	374	453	610	720	657	2.3%	3.8%	1.9%	3.0%	1.7%	-0.9%
Power generation/District heating	32	32	65	53	88	125	111	0.0%	7.4%	-1.9%	5.2%	3.6%	-1.2%
Industry	49	63	93	121	184	210	160	2.7%	3.9%	2.7%	4.2%	1.4%	-2.7%
Buildings	17	20	22	25	26	27	23	1.8%	1.2%	1.1%	0.5%	0.3%	-1.4%
Agriculture	2	5	6	8	10	11	12	7.3%	2.9%	3.0%	1.6%	1.4%	0.5%
Transport	65	80	119	179	218	242	238	2.1%	4.1%	4.2%	2.0%	1.0%	-0.2%
Other	40	57	69	67	84	104	114	3.6%	1.9%	-0.3%	2.3%	2.1%	0.9%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	2	26	n.s.	n.s.	n.s.	n.s.	42.4%	31.3%
Coal	0	0	0	0	0	2	26	n.s.	n.s.	n.s.	n.s.	52.8%	32.3%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	27.2%	11.5%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	9.0%	18.8%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	219	304	346	421	617	652	693	3.3%	1.3%	2.0%	3.9%	0.6%	0.6%
Coal	16	33	52	80	183	113	34	7.4%	4.8%	4.4%	8.6%	-4.7%	-11.2%
Oil	155	213	211	213	254	305	352	3.2%	-0.1%	0.1%	1.8%	1.8%	1.4%
Natural gas	25	31	50	66	88	100	107	2.3%	4.9%	2.8%	2.9%	1.3%	0.7%
Biomass	13	12	14	38	60	89	132	-1.4%	2.1%	10.3%	4.7%	4.0%	4.1%
Nuclear <sup>1</sup>	0	0	0	1	4	7	11	n.s.	n.s.	n.s.	10.9%	6.3%	4.0%
Hydro	10	16	18	21	24	26	29	4.6%	1.5%	1.6%	1.1%	1.0%	1.1%
Other renewables	0	0	0	1	5	13	28	n.s.	-10.4%	50.7%	15.8%	10.9%	8.0%
Net Imports	- 124	- 186	- 189	- 226	- 353	- 321	- 317						
Coal	- 12	- 29	- 48	- 67	- 144	- 55	13						
Oil	- 109	- 157	- 130	- 115	- 140	- 181	- 232						
Natural gas	- 1	4	- 8	- 24	- 42	- 49	- 51						
Biomass	0	0	0	- 16	- 23	- 28	- 32						
Biofuels	0	0	0	0	- 1	- 4	- 11						
Electricity	- 2	- 4	- 4	- 4	- 4	- 4	- 4						
Primary Energy Demand <sup>2</sup>	95	118	157	195	264	331	376	2.2%	2.9%	2.2%	3.1%	2.3%	1.3%
Coal	4	4	4	13	40	58	47	-1.3%	2.0%	11.5%	11.5%	3.8%	-1.9%
Oil	46	56	82	98	114	124	120	2.0%	3.8%	1.9%	1.5%	0.8%	-0.4%
Natural gas	24	35	43	43	46	50	56	3.9%	1.9%	0.0%	0.7%	0.9%	1.0%
Biomass	13	12	14	21	37	61	100	-1.4%	2.1%	4.2%	5.7%	5.0%	5.1%
Nuclear <sup>1</sup>	0	0	0	1	4	7	11	n.s.	n.s.	n.s.	10.9%	6.3%	4.0%
Hydro	10	16	18	21	24	26	29	4.6%	1.5%	1.6%	1.1%	1.0%	1.1%
Other renewables	0	0	0	1	5	13	28	n.s.	-10.4%	50.7%	15.8%	10.9%	8.0%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	95	118	157	195	264	331	376	2.2%	2.9%	2.2%	3.1%	2.3%	1.3%
Energy for Power Generation	22	27	43	45	65	93	120	2.3%	4.6%	0.5%	3.8%	3.6%	2.5%
Other Energy Transformation & Losses	13	18	17	20	31	51	81	3.4%	-0.7%	1.8%	4.7%	4.9%	4.8%
Final consumption	69	85	115	154	203	244	258	2.1%	3.1%	2.9%	2.9%	1.8%	0.6%
Steel, Non-Met. Minerals and Chem.	10	14	19	22	39	42	25	3.0%	3.5%	1.5%	5.7%	0.7%	-4.9%
Other Industry	13	16	25	35	44	57	68	1.7%	4.8%	3.3%	2.3%	2.6%	1.9%
Non-Energy Use	2	5	3	5	5	6	6	10.0%	-3.6%	3.5%	1.0%	1.4%	0.4%
Residential	16	16	19	19	21	24	26	0.2%	1.5%	0.2%	0.9%	1.2%	0.8%
Services	3	4	6	8	12	17	22	3.5%	3.9%	3.2%	3.8%	3.5%	2.7%
Agriculture	2	2	3	4	5	5	6	2.4%	2.4%	2.3%	1.4%	1.5%	1.4%
Road	22	27	39	59	75	90	101	2.2%	3.7%	4.3%	2.6%	1.8%	1.1%
Rail	0	0	0	0	0	0	0	-2.6%	1.3%	3.2%	1.6%	1.7%	1.5%
Aviation	0	0	0	0	0	1	1	-0.8%	1.1%	4.4%	4.2%	3.4%	0.9%
Other Transport	1	0	0	1	1	2	2	-5.5%	2.7%	6.9%	3.7%	2.9%	2.3%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest South America	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>12</b>	<b>12</b>	<b>25</b>	<b>21</b>	<b>33</b>	<b>46</b>	<b>51</b>	<b>0.0%</b>	<b>7.7%</b>	<b>-1.5%</b>	<b>4.4%</b>	<b>3.4%</b>	<b>1.0%</b>
Coal	1	1	1	6	17	28	26	-4.2%	7.9%	15.8%	10.8%	4.8%	-0.8%
Oil	3	4	9	3	1	1	1	1.9%	7.7%	-8.9%	-8.2%	-7.7%	6.2%
Gas	7	7	13	8	6	6	10	-0.6%	7.1%	-5.5%	-1.9%	-0.4%	4.8%
Biomass & Waste	0	0	1	4	8	12	15	1.7%	18.4%	13.1%	6.7%	4.0%	2.1%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>154</b>	<b>226</b>	<b>308</b>	<b>363</b>	<b>498</b>	<b>698</b>	<b>935</b>	<b>3.9%</b>	<b>3.1%</b>	<b>1.7%</b>	<b>3.2%</b>	<b>3.4%</b>	<b>3.0%</b>
Coal	4	3	5	29	86	143	134	-3.7%	6.9%	19.3%	11.5%	5.3%	-0.7%
of which CCS	0	0	0	0	0	1	25	n.s.	n.s.	n.s.	n.s.	n.s.	44.0%
Oil	13	15	32	15	6	3	5	2.1%	7.7%	-7.4%	-8.1%	-7.6%	6.4%
Gas	21	26	54	39	35	35	56	1.9%	7.8%	-3.3%	-1.0%	-0.1%	4.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	9.4%
Biomass & Waste	1	1	4	17	34	54	70	3.6%	19.1%	14.6%	7.5%	4.7%	2.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	6	16	30	45	n.s.	n.s.	n.s.	11.1%	6.4%	4.0%
Hydro	116	182	212	248	276	305	341	4.6%	1.5%	1.6%	1.1%	1.0%	1.1%
Wind	0	0	0	7	28	73	145	n.s.	n.s.	48.1%	14.9%	10.1%	7.1%
Solar	0	0	0	3	16	53	135	n.s.	n.s.	n.s.	18.6%	12.5%	9.7%
Other	0	0	0	0	0	1	5	n.s.	n.s.	n.s.	28.4%	18.9%	14.8%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>43</b>	<b>55</b>	<b>65</b>	<b>95</b>	<b>127</b>	<b>200</b>	<b>314</b>	<b>2.5%</b>	<b>1.8%</b>	<b>3.8%</b>	<b>3.0%</b>	<b>4.6%</b>	<b>4.6%</b>
Coal	1	1	1	4	12	25	30	4.7%	-0.2%	17.3%	11.6%	7.4%	1.7%
of which CCS	0	0	0	0	0	0	4	n.s.	n.s.	n.s.	n.s.	n.s.	46.0%
Oil	6	8	9	18	20	23	32	3.2%	0.3%	7.2%	1.1%	1.7%	3.2%
Gas	8	10	15	20	15	17	24	1.8%	4.8%	2.6%	-2.7%	1.4%	3.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	11.6%
Biomass & Waste	0	0	1	3	6	12	18	1.9%	14.0%	17.3%	7.3%	6.8%	4.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	1	3	5	7	n.s.	n.s.	n.s.	10.9%	6.2%	3.9%
Hydro	28	36	40	44	49	55	61	2.4%	1.1%	1.1%	1.1%	1.0%	1.1%
Wind	0	0	0	3	12	30	58	n.s.	n.s.	47.4%	14.7%	9.9%	6.9%
Solar	0	0	0	2	11	34	83	n.s.	n.s.	n.s.	18.3%	12.3%	9.5%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	27.7%	18.3%	14.3%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>69</b>	<b>85</b>	<b>115</b>	<b>154</b>	<b>203</b>	<b>244</b>	<b>258</b>	<b>2.1%</b>	<b>3.1%</b>	<b>2.9%</b>	<b>2.9%</b>	<b>1.8%</b>	<b>0.6%</b>
Coal	2	3	2	6	20	25	14	2.6%	-2.2%	9.7%	12.5%	2.5%	-5.4%
Oil	35	46	60	86	100	108	104	2.6%	2.8%	3.7%	1.5%	0.8%	-0.5%
Gas	9	13	23	23	28	30	30	3.2%	5.7%	0.2%	2.0%	0.9%	-0.3%
Electricity	8	12	17	22	32	46	63	3.4%	4.0%	2.4%	3.7%	3.8%	3.3%
Heat	0	0	0	0	1	2	4	n.s.	-17.4%	39.1%	14.3%	10.3%	6.4%
Biomass & Other	13	11	13	16	23	31	43	-1.5%	1.2%	2.1%	4.0%	3.0%	3.1%
Share of Renewables <sup>3</sup> (%)	33%	32%	26%	25%	28%	35%	50%	-0.3%	-1.9%	-0.5%	1.2%	2.2%	3.5%
<b>Industry (incl. non-energy use)</b>	<b>25</b>	<b>34</b>	<b>48</b>	<b>62</b>	<b>88</b>	<b>105</b>	<b>100</b>	<b>3.1%</b>	<b>3.4%</b>	<b>2.6%</b>	<b>3.6%</b>	<b>1.7%</b>	<b>-0.5%</b>
Coal	2	3	2	6	20	25	14	3.0%	-2.2%	9.9%	12.6%	2.5%	-5.4%
Oil	8	12	16	22	23	24	22	4.7%	2.5%	3.3%	0.7%	0.6%	-1.0%
Gas	9	11	18	18	20	21	20	2.3%	5.4%	-0.4%	1.4%	0.5%	-0.5%
Electricity	4	5	7	9	14	20	26	2.2%	3.9%	3.0%	3.9%	3.6%	2.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	3	3	4	7	11	14	17	1.7%	2.3%	4.9%	4.6%	2.3%	2.1%
<b>Buildings</b>	<b>19</b>	<b>20</b>	<b>25</b>	<b>28</b>	<b>33</b>	<b>41</b>	<b>48</b>	<b>0.8%</b>	<b>2.1%</b>	<b>1.0%</b>	<b>1.9%</b>	<b>2.1%</b>	<b>1.6%</b>
Coal	0	0	0	0	0	0	0	-5.9%	-3.0%	2.1%	-0.8%	-1.9%	-4.4%
Oil	5	5	5	5	4	4	3	0.5%	0.3%	-0.3%	-1.7%	-0.6%	-1.5%
Gas	1	2	3	4	6	6	6	9.7%	3.8%	3.9%	3.3%	1.1%	-1.3%
Electricity	4	7	10	12	15	20	25	4.2%	4.1%	1.9%	2.3%	2.7%	2.6%
Heat	0	0	0	0	1	2	4	n.s.	-17.4%	39.1%	14.3%	10.3%	6.4%
Biomass & Other	9	7	7	7	8	9	10	-2.5%	0.6%	-1.0%	1.6%	1.4%	0.9%
<b>Agriculture</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>2.4%</b>	<b>2.4%</b>	<b>2.3%</b>	<b>1.4%</b>	<b>1.5%</b>	<b>1.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	0.0%	-0.4%	-1.5%
Oil	1	1	2	3	3	3	4	7.2%	2.9%	3.0%	1.6%	1.4%	0.5%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	-5.6%	1.4%	1.2%	0.6%
Electricity	0	0	0	1	1	1	1	7.7%	5.2%	3.5%	2.5%	2.6%	3.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	1	1	1	1	1	1	-3.4%	0.2%	0.0%	0.0%	0.8%	3.1%
<b>Transport</b>	<b>22</b>	<b>27</b>	<b>39</b>	<b>60</b>	<b>77</b>	<b>93</b>	<b>104</b>	<b>2.0%</b>	<b>3.7%</b>	<b>4.3%</b>	<b>2.6%</b>	<b>1.8%</b>	<b>1.1%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	22	27	38	57	70	77	75	1.9%	3.4%	4.3%	2.0%	0.9%	-0.3%
Gas	0	0	1	1	2	3	4	29.8%	22.3%	-1.7%	5.0%	4.1%	3.4%
Electricity	0	0	0	0	2	6	11	0.7%	1.3%	7.0%	42.3%	11.1%	6.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	4	8	15	-22.0%	n.s.	20.4%	11.2%	7.6%	6.7%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>13</b>	<b>18</b>	<b>17</b>	<b>20</b>	<b>31</b>	<b>51</b>	<b>81</b>	<b>3.4%</b>	<b>-0.7%</b>	<b>1.8%</b>	<b>4.7%</b>	<b>4.9%</b>	<b>4.8%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

<b>Egypt</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	56	68	82	101	117	134	151	1.9%	1.8%	2.1%	1.5%	1.4%	1.2%
GDP per capita (ppp, k\$'05)	3	4	5	6	9	13	17	2.3%	2.9%	1.3%	3.7%	3.6%	2.7%
GDP per capita (mer, k\$'05)	1	1	1	2	2	3	4	2.3%	2.9%	1.3%	3.7%	3.6%	2.7%
Share Value Added - Agriculture (%)	19	17	14	13	10	9	8	-1.4%	-1.8%	-0.8%	-2.4%	-1.6%	-0.9%
Share Value Added - Industry (%)	29	33	38	39	40	37	34	1.5%	1.3%	0.5%	0.0%	-0.6%	-0.9%
Share Value Added - Services (%)	52	50	48	48	50	54	58	-0.4%	-0.3%	-0.2%	0.6%	0.7%	0.7%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	13	15	18	-6.5%	7.4%	-4.3%	0.9%	1.5%	1.4%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	18	21	30	38	51	65	84	1.4%	3.8%	2.3%	3.0%	2.6%	2.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	144	175	279	341	438	557	618	2.0%	4.8%	2.0%	2.5%	2.4%	1.0%
Total GHG (excl. sinks)	144	175	280	342	438	557	618	2.0%	4.8%	2.0%	2.5%	2.4%	1.0%
Total GHG (energy, industry, agriculture)	144	175	280	342	438	557	618	2.0%	4.8%	2.0%	2.5%	2.4%	1.0%
CO <sub>2</sub>	98	119	203	256	339	464	525	2.0%	5.5%	2.3%	2.8%	3.2%	1.2%
CH <sub>4</sub>	25	36	48	51	58	55	57	3.7%	3.0%	0.5%	1.2%	-0.5%	0.4%
N <sub>2</sub> O	19	18	24	31	37	35	34	-0.8%	3.2%	2.5%	1.9%	-0.5%	-0.3%
F gases	2	3	4	4	5	3	3	3.5%	2.8%	0.7%	1.6%	-4.2%	-1.6%
Total GHG from Energy and Industry	125	150	251	305	397	513	573	1.8%	5.3%	1.9%	2.7%	2.6%	1.1%
CO <sub>2</sub> Emissions from Fuel Comb.	86	102	177	223	291	401	451	1.7%	5.7%	2.3%	2.7%	3.3%	1.2%
Power generation/District heating	22	27	62	82	99	145	163	2.0%	8.7%	2.9%	1.9%	3.9%	1.1%
Industry	28	26	38	41	56	74	81	-0.5%	3.6%	0.8%	3.2%	2.8%	0.9%
Buildings	10	12	17	17	24	33	38	1.8%	3.8%	-0.2%	3.6%	3.2%	1.2%
Agriculture	0	0	7	8	9	11	11	n.s.	40.8%	1.1%	1.8%	1.6%	0.5%
Transport	16	29	38	59	81	109	125	6.1%	2.8%	4.6%	3.3%	2.9%	1.4%
Other	11	8	16	16	21	29	32	-2.5%	6.8%	0.3%	2.5%	3.3%	1.2%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	1	18	n.s.	n.s.	n.s.	n.s.	n.s.	37.3%
Coal	0	0	0	0	0	0	14	n.s.	n.s.	n.s.	n.s.	n.s.	42.4%
Gas	0	0	0	0	0	0	3	n.s.	n.s.	n.s.	n.s.	n.s.	27.8%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	1.4%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	53	58	89	97	120	162	205	0.9%	4.4%	0.8%	2.2%	3.0%	2.4%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	44	38	36	26	20	18	18	-1.4%	-0.7%	-3.2%	-2.3%	-1.3%	-0.1%
Natural gas	7	17	51	67	93	133	168	9.9%	11.4%	2.8%	3.4%	3.6%	2.4%
Biomass	2	1	2	1	1	2	2	-1.7%	1.7%	-1.8%	1.1%	1.6%	0.9%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	10.6%	20.5%
Hydro	1	1	1	1	1	1	1	3.3%	-0.5%	0.5%	0.8%	0.2%	0.3%
Other renewables	0	0	0	2	4	8	16	14.1%	16.0%	27.3%	9.1%	8.0%	7.3%
Net Imports	-21	-17	-17	-6	1	8	-3						
Coal	1	1	1	2	7	16	24						
Oil	-21	-16	-2	16	30	43	49						
Natural gas	0	-3	-15	-24	-35	-52	-76						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	33	41	73	91	121	169	202	2.2%	5.9%	2.2%	3.0%	3.4%	1.8%
Coal	1	1	1	2	7	16	24	2.8%	-6.7%	14.2%	13.0%	8.8%	4.2%
Oil	23	23	34	42	50	61	67	0.0%	4.0%	2.1%	1.9%	2.1%	0.9%
Natural gas	7	14	36	43	58	81	92	7.9%	9.5%	1.9%	3.0%	3.4%	1.2%
Biomass	2	1	2	1	1	2	2	-1.9%	1.7%	-1.7%	1.1%	1.6%	1.0%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	10.6%	20.5%
Hydro	1	1	1	1	1	1	1	3.3%	-0.5%	0.5%	0.8%	0.2%	0.3%
Other renewables	0	0	0	2	4	8	16	14.1%	16.0%	27.3%	9.1%	8.0%	7.3%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	33	41	73	91	121	169	202	2.2%	5.9%	2.2%	3.0%	3.4%	1.8%
Energy for Power Generation	9	12	26	35	43	62	80	3.1%	8.0%	3.2%	2.0%	3.8%	2.5%
Other Energy Transformation & Losses	4	3	5	3	5	9	12	-1.1%	4.6%	-5.3%	5.8%	5.7%	2.6%
Final consumption	24	31	52	67	92	127	152	2.8%	5.3%	2.5%	3.3%	3.3%	1.8%
Steel, Non-Met. Minerals and Chem.	1	1	0	1	1	1	0	1.0%	-6.0%	4.0%	5.5%	-2.2%	-15.3%
Other Industry	10	9	14	16	21	29	34	-0.3%	4.1%	1.3%	2.9%	3.3%	1.4%
Non-Energy Use	2	3	7	8	12	17	20	4.0%	8.1%	1.0%	4.2%	3.6%	1.7%
Residential	5	7	12	13	17	23	27	2.9%	4.9%	1.3%	2.6%	3.0%	1.8%
Services	0	1	2	3	4	7	10	11.3%	6.9%	2.6%	3.7%	5.2%	3.9%
Agriculture	0	0	3	4	4	5	6	9.9%	24.6%	3.1%	2.0%	2.1%	1.8%
Road	5	8	13	22	31	42	50	4.9%	5.2%	4.9%	3.6%	3.3%	1.8%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	4.1%	3.9%	3.1%
Aviation	0	0	1	1	1	2	3	8.0%	2.5%	4.3%	4.7%	4.9%	3.0%
Other Transport	0	1	1	0	1	1	1	n.s.	-3.5%	-4.4%	4.2%	3.6%	2.3%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%



<b>Egypt</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>8</b>	<b>11</b>	<b>25</b>	<b>33</b>	<b>38</b>	<b>53</b>	<b>62</b>	<b>3.1%</b>	<b>8.6%</b>	<b>2.8%</b>	<b>1.5%</b>	<b>3.4%</b>	<b>1.6%</b>
Coal	0	0	0	1	4	12	19	n.s.	n.s.	n.s.	16.5%	10.6%	4.7%
Oil	4	2	5	5	4	4	4	-6.9%	10.1%	0.2%	-2.9%	-0.7%	0.3%
Gas	4	9	20	26	30	37	39	8.3%	8.3%	3.1%	1.1%	2.3%	0.5%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	15.4%	8.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>42</b>	<b>78</b>	<b>147</b>	<b>205</b>	<b>263</b>	<b>397</b>	<b>538</b>	<b>6.3%</b>	<b>6.5%</b>	<b>3.4%</b>	<b>2.5%</b>	<b>4.2%</b>	<b>3.1%</b>
Coal	0	0	0	5	22	63	99	n.s.	n.s.	n.s.	16.8%	10.9%	4.7%
of which CCS	0	0	0	0	0	0	18	n.s.	n.s.	n.s.	n.s.	n.s.	50.6%
Oil	13	22	20	23	17	16	16	5.2%	-1.2%	1.3%	-2.9%	-0.6%	0.5%
Gas	19	42	112	147	168	213	229	8.3%	10.3%	2.7%	1.3%	2.4%	0.7%
of which CCS	0	0	0	0	0	1	8	n.s.	n.s.	n.s.	n.s.	n.s.	29.4%
Biomass & Waste	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	15.9%	9.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	10	14	13	14	15	15	16	3.3%	-0.5%	0.5%	0.8%	0.2%	0.3%
Wind	0	0	1	16	37	75	124	n.s.	23.7%	30.2%	8.8%	7.1%	5.2%
Solar	0	0	0	0	4	15	53	n.s.	n.s.	4.2%	24.1%	15.9%	13.1%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	19.6%	16.9%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>12</b>	<b>19</b>	<b>27</b>	<b>49</b>	<b>66</b>	<b>104</b>	<b>156</b>	<b>5.1%</b>	<b>3.3%</b>	<b>6.3%</b>	<b>3.0%</b>	<b>4.7%</b>	<b>4.1%</b>
Coal	0	0	0	1	3	9	15	n.s.	n.s.	n.s.	17.0%	11.3%	4.9%
of which CCS	0	0	0	0	0	0	3	n.s.	n.s.	n.s.	n.s.	n.s.	50.7%
Oil	4	6	5	5	5	4	4	3.5%	-2.5%	0.4%	0.7%	-2.8%	0.8%
Gas	5	10	18	33	36	47	51	8.3%	6.2%	6.1%	0.8%	2.8%	0.8%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	30.0%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.0%	9.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	3	3	3	3	3	3	3	0.3%	0.2%	0.8%	0.8%	0.2%	0.3%
Wind	0	0	1	7	16	32	52	n.s.	40.0%	29.2%	8.6%	7.0%	5.0%
Solar	0	0	0	0	2	9	30	n.s.	n.s.	21.1%	24.6%	15.8%	13.1%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	19.0%	16.3%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>24</b>	<b>31</b>	<b>52</b>	<b>67</b>	<b>92</b>	<b>127</b>	<b>152</b>	<b>2.8%</b>	<b>5.3%</b>	<b>2.5%</b>	<b>3.3%</b>	<b>3.3%</b>	<b>1.8%</b>
Coal	1	1	0	1	2	3	4	1.0%	-6.0%	8.2%	9.1%	4.2%	1.6%
Oil	16	20	29	36	46	57	63	2.2%	3.9%	2.3%	2.3%	2.2%	0.9%
Gas	2	4	11	14	24	36	44	5.0%	10.7%	2.3%	5.6%	4.3%	1.8%
Electricity	3	6	11	14	18	28	38	5.9%	6.8%	3.0%	2.5%	4.2%	3.2%
Heat	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	4.6%	4.8%	12.5%
Biomass & Other	2	1	2	1	2	2	3	-1.9%	1.7%	-1.6%	1.9%	3.4%	3.4%
Share of Renewables <sup>3</sup> (%)	11%	8%	6%	6%	8%	10%	16%	-2.6%	-3.7%	0.8%	2.2%	2.9%	4.4%
<b>Industry (incl. non-energy use)</b>	<b>12</b>	<b>13</b>	<b>21</b>	<b>24</b>	<b>34</b>	<b>47</b>	<b>54</b>	<b>0.6%</b>	<b>4.9%</b>	<b>1.3%</b>	<b>3.4%</b>	<b>3.3%</b>	<b>1.4%</b>
Coal	1	1	0	1	2	3	4	1.0%	-6.0%	8.2%	9.1%	4.2%	1.6%
Oil	7	7	8	8	10	12	13	-0.9%	1.3%	0.5%	2.2%	2.0%	0.9%
Gas	2	4	10	11	16	22	25	4.4%	10.4%	1.1%	3.8%	3.5%	1.2%
Electricity	1	2	4	4	6	9	11	3.8%	5.2%	2.3%	2.6%	4.3%	2.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	0	0	0	0	0	0	n.s.	n.s.	n.s.	19.5%	5.2%	-1.7%
<b>Buildings</b>	<b>6</b>	<b>8</b>	<b>14</b>	<b>16</b>	<b>21</b>	<b>30</b>	<b>38</b>	<b>3.7%</b>	<b>5.2%</b>	<b>1.5%</b>	<b>2.8%</b>	<b>3.4%</b>	<b>2.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	4	5	4	3	2	2	1.3%	3.2%	-3.0%	-2.1%	-1.6%	-1.8%
Gas	0	0	1	2	6	11	13	16.9%	9.7%	10.9%	10.4%	5.4%	1.9%
Electricity	2	3	7	9	11	15	20	7.5%	7.7%	2.8%	1.9%	3.7%	2.9%
Heat	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	4.6%	4.8%	12.5%
Biomass & Other	1	1	2	1	1	1	1	2.1%	1.7%	-2.2%	-1.6%	-1.4%	-0.7%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>9.9%</b>	<b>24.6%</b>	<b>3.1%</b>	<b>2.0%</b>	<b>2.1%</b>	<b>1.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	2	2	3	3	4	n.s.	40.8%	1.1%	1.8%	1.6%	0.5%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	1	1	2	3	6.9%	6.9%	10.0%	2.6%	2.9%	3.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	18.2%
<b>Transport</b>	<b>5</b>	<b>9</b>	<b>14</b>	<b>23</b>	<b>33</b>	<b>45</b>	<b>54</b>	<b>5.9%</b>	<b>4.6%</b>	<b>4.7%</b>	<b>3.6%</b>	<b>3.3%</b>	<b>1.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	5	9	14	22	30	39	43	5.9%	4.3%	4.7%	3.0%	2.7%	1.1%
Gas	0	0	0	1	2	3	5	n.s.	n.s.	4.1%	11.8%	7.6%	4.8%
Electricity	0	0	0	0	1	2	4	n.s.	n.s.	n.s.	29.7%	11.3%	6.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	22.9%	12.2%	7.5%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>4</b>	<b>3</b>	<b>5</b>	<b>3</b>	<b>5</b>	<b>9</b>	<b>12</b>	<b>-1.1%</b>	<b>4.6%</b>	<b>-5.3%</b>	<b>5.8%</b>	<b>5.7%</b>	<b>2.6%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Algeria & Libya	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	30	37	42	50	56	60	65	1.9%	1.5%	1.6%	1.1%	0.8%	0.7%
GDP per capita (ppp, k\$'05)	5	7	6	8	12	16	20	2.9%	-0.7%	2.6%	3.8%	3.1%	2.3%
GDP per capita (mer, k\$'05)	2	3	4	4	6	9	11	3.7%	2.6%	0.8%	3.8%	3.1%	2.3%
Share Value Added - Agriculture (%)	8	5	9	8	7	6	6	-3.4%	4.6%	-0.8%	-1.9%	-1.1%	-0.6%
Share Value Added - Industry (%)	33	36	51	48	46	42	38	1.0%	3.6%	-0.6%	-0.5%	-0.9%	-1.0%
Share Value Added - Services (%)	59	58	40	44	47	52	57	-0.2%	-3.7%	0.9%	0.8%	0.9%	0.8%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	13	15	18	-6.5%	7.4%	-4.3%	0.9%	1.5%	1.4%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	18	21	30	38	51	65	84	1.4%	3.8%	2.3%	3.0%	2.6%	2.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	170	204	264	344	427	527	551	1.9%	2.6%	2.7%	2.2%	2.1%	0.4%
Total GHG (excl. sinks)	170	205	265	345	428	527	553	1.9%	2.6%	2.7%	2.2%	2.1%	0.5%
Total GHG (energy, industry, agriculture)	168	203	262	342	426	525	550	1.9%	2.6%	2.7%	2.2%	2.1%	0.5%
CO <sub>2</sub>	114	140	190	272	370	465	494	2.1%	3.1%	3.7%	3.1%	2.3%	0.6%
CH <sub>4</sub>	48	57	64	59	45	48	44	1.7%	1.2%	-0.9%	-2.7%	0.6%	-0.8%
N <sub>2</sub> O	6	5	7	10	10	12	11	-0.4%	2.9%	3.6%	0.3%	1.4%	-0.5%
F gases	1	1	1	1	1	1	1	4.0%	3.0%	1.0%	-6.1%	1.6%	0.2%
Total GHG from Energy and Industry	160	195	253	329	411	509	534	2.0%	2.7%	2.7%	2.3%	2.2%	0.5%
CO <sub>2</sub> Emissions from Fuel Comb.	81	109	156	229	317	403	429	3.0%	3.7%	3.9%	3.3%	2.4%	0.6%
Power generation/District heating	18	32	47	59	97	138	153	5.8%	4.1%	2.3%	5.0%	3.6%	1.0%
Industry	11	15	20	22	25	26	25	2.7%	2.8%	1.3%	1.1%	0.6%	-0.5%
Buildings	9	13	19	31	35	39	39	3.7%	3.7%	4.9%	1.1%	1.1%	0.0%
Agriculture	0	0	0	0	0	0	0	0.9%	17.6%	1.3%	1.5%	1.1%	0.3%
Transport	18	23	45	83	115	140	146	2.7%	7.1%	6.3%	3.3%	2.0%	0.4%
Other	25	26	24	32	46	60	67	0.5%	-0.7%	3.0%	3.5%	2.7%	1.1%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	1	18	n.s.	n.s.	n.s.	n.s.	17.2%	33.4%
Coal	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	5.7%	35.0%
Gas	0	0	0	0	0	1	16	n.s.	n.s.	n.s.	n.s.	22.0%	33.7%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	1.0%	0.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	183	224	246	229	282	313	307	2.0%	0.9%	-0.7%	2.1%	1.0%	-0.2%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	137	149	165	140	149	163	165	0.9%	1.0%	-1.6%	0.6%	0.9%	0.1%
Natural gas	46	74	81	88	132	148	138	4.9%	0.8%	0.9%	4.1%	1.1%	-0.7%
Biomass	0	0	0	1	1	1	1	3.6%	1.1%	10.6%	5.3%	3.4%	-1.4%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	14.4%	9.0%	1.6%
Hydro	0	0	0	0	0	0	0	-8.8%	12.4%	9.9%	0.6%	0.5%	0.9%
Other renewables	0	0	0	0	0	1	3	n.s.	n.s.	13.3%	12.2%	13.9%	15.7%
Net Imports	-150	-180	-184	-140	-157	-152	-126						
Coal	1	1	1	1	1	2	3						
Oil	-121	-127	-133	-94	-90	-92	-94						
Natural gas	-30	-53	-51	-46	-69	-62	-36						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	33	44	62	89	125	160	181	2.9%	3.4%	3.8%	3.4%	2.5%	1.2%
Coal	1	1	1	1	1	2	3	0.7%	-3.1%	0.7%	7.3%	6.1%	4.7%
Oil	16	22	32	46	59	71	71	3.2%	3.7%	3.7%	2.7%	1.8%	0.1%
Natural gas	16	21	29	42	63	86	102	2.6%	3.3%	3.8%	4.1%	3.1%	1.8%
Biomass	0	0	0	0	1	2	2	3.6%	1.1%	8.6%	7.3%	4.4%	0.6%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	14.4%	9.0%	1.6%
Hydro	0	0	0	0	0	0	0	-8.8%	12.4%	9.9%	0.6%	0.5%	0.9%
Other renewables	0	0	0	0	0	1	3	n.s.	n.s.	13.3%	12.2%	13.9%	15.7%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	33	44	62	89	125	160	181	2.9%	3.4%	3.8%	3.4%	2.5%	1.2%
Energy for Power Generation	7	12	19	24	39	56	70	5.8%	4.5%	2.6%	5.0%	3.7%	2.2%
Other Energy Transformation & Losses	10	11	9	11	17	23	28	0.4%	-1.3%	2.1%	4.1%	3.2%	1.7%
Final consumption	18	24	39	61	81	99	108	3.0%	5.0%	4.5%	2.9%	2.1%	0.9%
Steel, Non-Met. Minerals and Chem.	2	2	3	4	4	4	3	1.2%	5.6%	3.2%	-0.7%	-0.9%	-1.7%
Other Industry	2	3	3	4	6	8	8	3.0%	2.3%	2.7%	3.3%	2.3%	0.7%
Non-Energy Use	3	5	5	5	7	9	10	3.5%	1.4%	0.3%	3.1%	1.9%	0.7%
Residential	4	6	8	13	15	17	18	4.6%	3.1%	5.2%	1.4%	1.3%	0.6%
Services	0	1	3	4	6	9	11	4.3%	18.4%	2.2%	4.6%	3.6%	2.5%
Agriculture	0	0	0	0	0	0	0	0.9%	10.0%	-2.8%	2.4%	2.1%	1.9%
Road	7	8	16	29	41	53	57	2.2%	6.5%	6.4%	3.6%	2.4%	0.9%
Rail	0	0	0	0	0	0	0	1.4%	9.3%	2.4%	0.6%	0.4%	0.2%
Aviation	0	0	0	0	0	0	0	7.2%	26.3%	-1.4%	3.8%	3.4%	0.5%
Other Transport	0	0	0	0	0	0	0	0.9%	9.8%	4.7%	3.5%	2.5%	1.1%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Algeria & Libya	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>7</b>	<b>12</b>	<b>19</b>	<b>24</b>	<b>39</b>	<b>56</b>	<b>67</b>	<b>5.8%</b>	<b>4.5%</b>	<b>2.6%</b>	<b>5.0%</b>	<b>3.6%</b>	<b>1.9%</b>
Coal	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	19.5%	11.6%	7.1%
Oil	3	5	5	4	6	8	8	5.1%	0.5%	-1.6%	4.0%	3.1%	-0.5%
Gas	4	7	14	20	32	46	57	6.3%	6.5%	3.7%	5.1%	3.5%	2.1%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	30.9%	9.7%	4.8%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>27</b>	<b>43</b>	<b>81</b>	<b>119</b>	<b>200</b>	<b>298</b>	<b>384</b>	<b>4.6%</b>	<b>6.5%</b>	<b>3.9%</b>	<b>5.4%</b>	<b>4.1%</b>	<b>2.6%</b>
Coal	0	0	0	0	2	7	13	n.s.	n.s.	n.s.	19.9%	11.9%	7.1%
of which CCS	0	0	0	0	0	0	3	n.s.	n.s.	n.s.	n.s.	n.s.	47.6%
Oil	11	13	18	18	26	36	35	1.5%	3.6%	-0.4%	4.0%	3.2%	-0.3%
Gas	16	30	62	99	169	249	315	6.4%	7.6%	4.8%	5.5%	3.9%	2.4%
of which CCS	0	0	0	0	0	1	39	n.s.	n.s.	n.s.	n.s.	27.1%	38.7%
Biomass & Waste	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	32.2%	10.2%	5.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	13.2%	7.9%	1.9%
Hydro	0	0	0	0	0	0	1	-8.8%	12.4%	9.9%	0.6%	0.5%	0.9%
Wind	0	0	0	0	1	3	10	n.s.	n.s.	n.s.	24.7%	14.1%	12.9%
Solar	0	0	0	1	1	2	8	n.s.	n.s.	11.4%	6.4%	9.2%	12.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	18.1%	16.1%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>8</b>	<b>11</b>	<b>20</b>	<b>25</b>	<b>33</b>	<b>48</b>	<b>69</b>	<b>2.7%</b>	<b>6.3%</b>	<b>2.4%</b>	<b>2.8%</b>	<b>3.8%</b>	<b>3.7%</b>
Coal	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	20.1%	11.9%	7.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	47.3%
Oil	4	4	4	4	5	7	7	-0.5%	-0.1%	1.2%	1.5%	2.8%	0.8%
Gas	4	6	15	20	26	37	50	5.8%	9.1%	2.6%	2.8%	3.5%	3.1%
of which CCS	0	0	0	0	0	0	5	n.s.	n.s.	n.s.	n.s.	27.3%	38.8%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	32.4%	10.2%	5.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	7.6%	1.7%
Hydro	0	0	0	0	0	0	0	-0.4%	0.0%	-1.3%	0.6%	0.5%	0.9%
Wind	0	0	0	0	0	1	4	n.s.	n.s.	n.s.	24.3%	13.9%	12.7%
Solar	0	0	0	0	1	1	5	n.s.	n.s.	11.4%	6.5%	9.3%	13.0%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	15.6%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>18</b>	<b>24</b>	<b>39</b>	<b>61</b>	<b>81</b>	<b>99</b>	<b>108</b>	<b>3.0%</b>	<b>5.0%</b>	<b>4.5%</b>	<b>2.9%</b>	<b>2.1%</b>	<b>0.9%</b>
Coal	0	0	0	0	1	1	1	-3.2%	-0.9%	1.7%	5.2%	1.8%	-0.2%
Oil	11	14	23	38	48	56	57	2.3%	4.9%	5.0%	2.6%	1.6%	0.1%
Gas	4	7	10	15	19	23	25	4.6%	4.2%	3.9%	2.3%	2.0%	0.7%
Electricity	2	2	5	7	12	17	22	4.7%	7.8%	2.7%	5.4%	4.1%	2.6%
Heat	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	30.2%	22.4%
Biomass & Other	0	0	0	1	1	2	3	3.6%	1.1%	14.3%	4.1%	4.8%	3.7%
Share of Renewables <sup>3</sup> (%)	1%	1%	1%	1%	1%	2%	4%	0.0%	-3.0%	2.0%	1.8%	5.0%	8.9%
<b>Industry (incl. non-energy use)</b>	<b>7</b>	<b>9</b>	<b>12</b>	<b>14</b>	<b>17</b>	<b>20</b>	<b>21</b>	<b>2.9%</b>	<b>2.6%</b>	<b>1.8%</b>	<b>2.2%</b>	<b>1.5%</b>	<b>0.3%</b>
Coal	0	0	0	0	1	1	1	-3.2%	-0.9%	1.7%	5.2%	1.8%	-0.2%
Oil	2	3	4	5	6	6	6	2.5%	2.8%	0.9%	2.0%	1.0%	0.2%
Gas	3	5	6	7	8	8	8	3.7%	2.4%	1.3%	1.0%	0.9%	-0.2%
Electricity	1	1	1	2	4	5	6	2.7%	4.0%	6.0%	5.0%	3.3%	1.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-1.4%	-0.2%	-1.3%
<b>Buildings</b>	<b>4</b>	<b>6</b>	<b>11</b>	<b>17</b>	<b>21</b>	<b>26</b>	<b>29</b>	<b>4.6%</b>	<b>5.6%</b>	<b>4.4%</b>	<b>2.2%</b>	<b>2.0%</b>	<b>1.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	3	3	4	4	4	3	2.3%	1.0%	2.9%	-0.5%	-0.3%	-0.7%
Gas	1	2	4	8	10	12	12	6.9%	7.5%	6.6%	2.0%	1.7%	0.3%
Electricity	1	1	4	4	7	10	12	6.6%	9.5%	1.7%	4.7%	3.6%	2.3%
Heat	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	30.2%	22.4%
Biomass & Other	0	0	0	1	1	1	1	3.6%	1.1%	13.5%	0.5%	0.1%	-0.7%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.9%</b>	<b>10.0%</b>	<b>-2.8%</b>	<b>2.4%</b>	<b>2.1%</b>	<b>1.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	0.9%	11.8%	0.1%	1.6%	1.1%	0.3%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	3.0%	1.4%	1.0%	0.4%
Electricity	0	0	0	0	0	0	0	1.0%	8.8%	-3.9%	2.6%	2.4%	2.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	10.8%
<b>Transport</b>	<b>7</b>	<b>8</b>	<b>16</b>	<b>29</b>	<b>42</b>	<b>53</b>	<b>58</b>	<b>2.2%</b>	<b>6.6%</b>	<b>6.3%</b>	<b>3.6%</b>	<b>2.4%</b>	<b>0.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	7	8	16	29	39	47	47	2.2%	6.6%	6.2%	3.0%	1.8%	0.1%
Gas	0	0	0	0	1	3	5	n.s.	n.s.	n.s.	28.3%	7.7%	4.2%
Electricity	0	0	0	0	1	2	4	3.0%	6.5%	6.1%	26.6%	10.1%	6.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	34.2%	11.1%	6.2%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>10</b>	<b>11</b>	<b>9</b>	<b>11</b>	<b>17</b>	<b>23</b>	<b>28</b>	<b>0.4%</b>	<b>-1.3%</b>	<b>2.1%</b>	<b>4.1%</b>	<b>3.2%</b>	<b>1.7%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Morocco & Tunisia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	33	39	43	49	53	56	58	1.6%	1.1%	1.2%	0.8%	0.5%	0.3%
GDP per capita (ppp, k\$'05)	3	4	5	7	11	16	23	1.7%	3.7%	3.2%	4.2%	4.1%	3.4%
GDP per capita (mer, k\$'05)	2	2	3	4	5	8	11	1.9%	3.7%	3.1%	4.2%	4.1%	3.4%
Share Value Added - Agriculture (%)	18	14	13	10	8	7	6	-2.8%	-0.5%	-2.4%	-2.3%	-1.5%	-0.9%
Share Value Added - Industry (%)	33	30	30	30	30	26	23	-1.2%	0.2%	0.1%	-0.3%	-1.1%	-1.6%
Share Value Added - Services (%)	48	57	57	59	62	67	71	1.6%	0.0%	0.4%	0.5%	0.7%	0.7%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	13	15	18	-6.5%	7.4%	-4.3%	0.9%	1.5%	1.4%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	18	21	30	38	51	65	84	1.4%	3.8%	2.3%	3.0%	2.6%	2.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	51	69	103	139	149	161	166	3.1%	4.1%	3.0%	0.7%	0.8%	0.3%
Total GHG (excl. sinks)	60	79	103	139	151	164	169	2.9%	2.7%	3.0%	0.8%	0.8%	0.3%
Total GHG (energy, industry, agriculture)	59	78	103	139	151	164	169	2.9%	2.8%	3.0%	0.8%	0.8%	0.3%
CO <sub>2</sub>	37	54	76	111	123	133	137	3.8%	3.5%	3.8%	1.0%	0.8%	0.3%
CH <sub>4</sub>	13	16	18	19	19	21	21	2.1%	1.3%	0.4%	0.1%	0.9%	0.1%
N <sub>2</sub> O	8	8	8	9	9	10	11	-0.2%	0.6%	0.9%	0.0%	1.2%	0.8%
F gases	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Total GHG from Energy and Industry	46	65	89	124	135	147	151	3.5%	3.3%	3.4%	0.9%	0.8%	0.3%
CO <sub>2</sub> Emissions from Fuel Comb.	32	47	67	98	106	112	115	3.9%	3.5%	3.9%	0.8%	0.6%	0.2%
Power generation/District heating	12	17	24	37	38	36	31	3.9%	3.6%	4.5%	0.1%	-0.6%	-1.4%
Industry	9	9	11	18	19	22	24	0.2%	2.3%	4.9%	0.9%	1.1%	0.9%
Buildings	3	5	7	9	13	15	17	5.8%	2.9%	2.9%	4.1%	1.4%	0.9%
Agriculture	2	3	5	6	5	4	2	6.6%	4.7%	2.5%	-2.5%	-3.3%	-3.6%
Transport	6	12	17	23	26	32	35	6.4%	3.9%	3.1%	1.2%	1.8%	1.2%
Other	2	2	3	4	5	5	5	2.3%	5.0%	2.8%	1.0%	1.2%	0.8%
CO <sub>2</sub> captured (CCS)	0	0	0	0	8	33	58	n.s.	n.s.	n.s.	n.s.	15.4%	5.7%
Coal	0	0	0	0	7	29	52	n.s.	n.s.	n.s.	n.s.	15.8%	6.0%
Gas	0	0	0	0	1	4	6	n.s.	n.s.	n.s.	n.s.	13.5%	3.2%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	6.8%	4.5%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	7	8	9	8	13	18	23	0.8%	1.9%	-0.8%	4.5%	3.2%	2.7%
Coal	0	0	0	0	0	0	0	-22.8%	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	5	4	4	3	4	5	6	-2.1%	0.2%	-2.6%	3.0%	2.3%	1.6%
Natural gas	0	2	2	3	4	6	8	17.5%	3.7%	1.6%	3.8%	3.8%	2.5%
Biomass	1	2	2	2	2	2	2	2.7%	1.8%	-3.2%	3.6%	-0.1%	-0.5%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	15.5%	12.2%
Hydro	0	0	0	0	0	0	0	-4.7%	16.8%	-2.9%	1.8%	0.3%	0.3%
Other renewables	0	0	0	1	2	4	7	n.s.	29.1%	19.9%	13.8%	6.9%	5.5%
Net Imports	6	11	17	28	32	39	45						
Coal	1	3	3	7	8	14	19						
Oil	4	7	11	16	14	13	12						
Natural gas	1	1	3	5	10	11	12						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	12	18	27	36	45	57	68	3.8%	3.9%	3.2%	2.2%	2.4%	1.8%
Coal	1	3	3	7	8	14	19	8.2%	0.1%	8.9%	2.0%	5.8%	3.3%
Oil	8	10	15	19	18	18	18	2.2%	4.0%	2.2%	-0.6%	0.3%	0.0%
Natural gas	1	3	5	8	14	17	20	8.2%	6.9%	3.8%	5.9%	2.1%	1.4%
Biomass	1	2	2	2	2	2	2	2.7%	1.8%	-3.0%	3.4%	-0.2%	-0.5%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	15.5%	12.2%
Hydro	0	0	0	0	0	0	0	-4.7%	16.8%	-2.9%	1.8%	0.3%	0.3%
Other renewables	0	0	0	1	2	4	7	n.s.	29.1%	19.9%	13.8%	6.9%	5.5%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	12	18	27	36	45	57	68	3.8%	3.9%	3.2%	2.2%	2.4%	1.8%
Energy for Power Generation	4	5	8	12	17	25	33	3.7%	4.4%	3.9%	3.2%	4.0%	2.9%
Other Energy Transformation & Losses	1	1	1	2	3	4	4	1.0%	9.6%	2.9%	4.5%	2.0%	1.3%
Final consumption	9	14	20	27	33	41	48	4.2%	3.7%	3.0%	2.1%	2.0%	1.7%
Steel, Non-Met. Minerals and Chem.	0	0	2	4	4	5	5	0.1%	20.9%	5.1%	0.9%	1.4%	1.3%
Other Industry	3	3	3	4	5	7	8	1.3%	-2.5%	4.9%	2.7%	2.3%	1.5%
Non-Energy Use	0	0	1	1	1	1	1	8.2%	4.4%	2.2%	-0.7%	0.0%	-0.5%
Residential	2	3	5	5	6	7	7	4.5%	3.2%	1.1%	1.8%	1.0%	1.2%
Services	1	1	2	2	3	4	6	3.6%	4.9%	1.4%	5.1%	3.3%	3.2%
Agriculture	1	1	2	2	3	3	4	6.5%	5.0%	2.6%	1.7%	1.6%	1.4%
Road	2	4	6	8	10	13	15	6.1%	3.7%	3.3%	2.1%	2.5%	1.8%
Rail	0	0	0	0	0	0	0	5.6%	3.4%	1.5%	0.9%	0.8%	0.6%
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	7.4%	3.5%	4.7%	2.5%
Other Transport	0	0	1	1	1	1	1	9.9%	5.3%	3.7%	2.2%	1.9%	1.2%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Morocco & Tunisia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>4</b>	<b>5</b>	<b>8</b>	<b>11</b>	<b>14</b>	<b>20</b>	<b>25</b>	<b>3.8%</b>	<b>4.0%</b>	<b>3.7%</b>	<b>2.3%</b>	<b>3.6%</b>	<b>2.3%</b>
Coal	1	2	3	6	7	12	16	10.9%	2.7%	7.8%	1.2%	5.9%	3.2%
Oil	2	1	1	1	2	2	1	-5.9%	1.8%	1.1%	0.7%	1.0%	-1.5%
Gas	1	2	4	4	6	7	8	9.2%	6.1%	0.5%	4.1%	0.9%	1.5%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	1.0%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>15</b>	<b>23</b>	<b>40</b>	<b>62</b>	<b>97</b>	<b>149</b>	<b>211</b>	<b>4.3%</b>	<b>5.5%</b>	<b>4.5%</b>	<b>4.5%</b>	<b>4.4%</b>	<b>3.5%</b>
Coal	2	9	11	26	31	55	78	14.8%	2.2%	9.1%	1.7%	6.0%	3.5%
of which CCS	0	0	0	0	8	35	65	n.s.	n.s.	n.s.	n.s.	16.3%	6.4%
Oil	8	5	6	6	7	7	7	-5.8%	2.4%	0.8%	0.7%	1.1%	-1.3%
Gas	4	9	19	21	31	35	42	9.6%	7.4%	0.9%	4.2%	1.0%	1.9%
of which CCS	0	0	0	0	3	11	16	n.s.	n.s.	n.s.	n.s.	14.0%	3.5%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	1.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	1	1	4	3	3	3	3	-4.7%	16.8%	-2.9%	1.8%	0.3%	0.3%
Wind	0	0	1	6	17	27	44	n.s.	23.5%	23.2%	11.1%	5.0%	5.0%
Solar	0	0	0	1	8	21	36	n.s.	n.s.	20.8%	30.3%	10.2%	5.5%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	36.3%	18.1%	13.1%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>4</b>	<b>7</b>	<b>10</b>	<b>15</b>	<b>27</b>	<b>42</b>	<b>63</b>	<b>6.8%</b>	<b>3.5%</b>	<b>3.9%</b>	<b>6.2%</b>	<b>4.4%</b>	<b>4.3%</b>
Coal	0	1	2	4	6	8	11	12.1%	2.1%	8.5%	3.9%	2.9%	3.9%
of which CCS	0	0	0	0	1	5	9	n.s.	n.s.	n.s.	n.s.	16.3%	7.2%
Oil	2	2	2	2	1	1	1	3.4%	-0.6%	-2.2%	-3.1%	0.4%	0.8%
Gas	1	2	4	4	5	5	8	10.7%	7.7%	-0.2%	2.6%	0.5%	3.4%
of which CCS	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	14.2%	4.3%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	1.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	1	2	2	2	3	3	3	4.3%	1.4%	1.8%	1.8%	0.3%	0.3%
Wind	0	0	0	3	7	12	19	n.s.	18.7%	22.5%	11.0%	4.8%	4.8%
Solar	0	0	0	0	5	13	21	n.s.	n.s.	21.0%	30.0%	10.0%	5.4%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.5%	12.6%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>9</b>	<b>14</b>	<b>20</b>	<b>27</b>	<b>33</b>	<b>41</b>	<b>48</b>	<b>4.2%</b>	<b>3.7%</b>	<b>3.0%</b>	<b>2.1%</b>	<b>2.0%</b>	<b>1.7%</b>
Coal	0	1	0	1	1	2	2	2.8%	-30.6%	44.2%	6.8%	3.8%	3.4%
Oil	6	9	13	17	16	16	16	4.3%	4.1%	2.2%	-0.7%	0.2%	0.1%
Gas	0	1	1	3	7	10	11	6.1%	5.9%	11.5%	7.8%	3.0%	1.5%
Electricity	1	2	3	5	7	11	15	5.2%	5.5%	3.9%	4.3%	4.3%	3.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	5.2%	-2.3%	8.7%	12.6%
Biomass & Other	1	2	2	2	2	2	3	2.7%	1.8%	-3.2%	2.7%	1.1%	1.4%
Share of Renewables <sup>3</sup> (%)	17%	14%	13%	9%	13%	17%	22%	-1.6%	-0.6%	-4.2%	4.5%	2.6%	2.3%
<b>Industry (incl. non-energy use)</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>9</b>	<b>10</b>	<b>12</b>	<b>14</b>	<b>1.7%</b>	<b>3.1%</b>	<b>4.7%</b>	<b>1.6%</b>	<b>1.8%</b>	<b>1.3%</b>
Coal	0	1	0	1	1	2	2	2.8%	-30.6%	44.2%	6.8%	3.8%	3.4%
Oil	2	2	3	4	3	2	2	-0.4%	5.5%	2.4%	-3.2%	-2.5%	-2.1%
Gas	0	0	1	2	3	4	4	5.1%	5.5%	6.9%	6.0%	2.9%	0.8%
Electricity	1	1	1	2	3	4	5	4.3%	3.1%	5.6%	3.5%	3.5%	2.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	1.1%	0.4%	1.3%	-4.8%	-5.9%
<b>Buildings</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>9</b>	<b>11</b>	<b>14</b>	<b>4.2%</b>	<b>3.7%</b>	<b>1.2%</b>	<b>2.8%</b>	<b>1.9%</b>	<b>2.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	2	2	1	1	1	5.5%	2.5%	-2.1%	-1.4%	-1.1%	-0.4%
Gas	0	0	0	2	4	5	6	10.1%	6.9%	18.7%	8.5%	2.4%	1.3%
Electricity	0	1	2	2	3	4	6	6.4%	7.6%	2.5%	3.0%	3.8%	3.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	5.2%	-2.3%	8.7%	12.6%
Biomass & Other	1	2	2	1	1	1	0	2.3%	1.8%	-4.1%	-3.6%	-5.4%	-4.5%
<b>Agriculture</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>6.5%</b>	<b>5.0%</b>	<b>2.6%</b>	<b>1.7%</b>	<b>1.6%</b>	<b>1.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	2	2	2	1	1	6.6%	4.7%	2.5%	-2.5%	-3.3%	-3.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	1.6%	-1.4%	-2.0%	-2.2%
Electricity	0	0	0	0	1	1	2	6.1%	6.9%	3.2%	10.0%	5.8%	4.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	50.2%	6.4%	2.3%
<b>Transport</b>	<b>2</b>	<b>4</b>	<b>7</b>	<b>9</b>	<b>11</b>	<b>14</b>	<b>17</b>	<b>6.3%</b>	<b>3.8%</b>	<b>3.3%</b>	<b>2.1%</b>	<b>2.4%</b>	<b>1.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	4	6	9	10	11	12	6.3%	3.8%	3.1%	0.9%	1.5%	0.9%
Gas	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	22.3%	7.2%	4.6%
Electricity	0	0	0	0	0	1	2	2.8%	-1.8%	7.9%	23.0%	9.3%	4.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	1	n.s.	n.s.	n.s.	17.9%	4.2%	3.6%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>1.0%</b>	<b>9.6%</b>	<b>2.9%</b>	<b>4.5%</b>	<b>2.0%</b>	<b>1.3%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

South Africa	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	37	45	52	57	60	63	66	2.0%	1.4%	0.9%	0.6%	0.5%	0.4%
GDP per capita (ppp, k\$'05)	8	7	9	10	14	18	22	-0.2%	2.1%	1.1%	2.8%	3.0%	1.8%
GDP per capita (mer, k\$'05)	5	5	6	6	8	11	14	-0.2%	2.0%	1.0%	2.8%	3.0%	1.8%
Share Value Added - Agriculture (%)	5	3	3	3	2	2	2	-3.4%	-2.4%	-0.2%	-0.7%	-0.5%	-0.3%
Share Value Added - Industry (%)	40	32	30	28	26	23	20	-2.3%	-0.6%	-0.6%	-0.9%	-1.3%	-1.0%
Share Value Added - Services (%)	55	65	68	69	72	75	77	1.6%	0.4%	0.3%	0.3%	0.4%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	13	15	18	-6.5%	7.4%	-4.3%	0.9%	1.5%	1.4%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	18	21	30	38	51	65	84	1.4%	3.8%	2.3%	3.0%	2.6%	2.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	354	404	514	524	543	611	594	1.3%	2.4%	0.2%	0.4%	1.2%	-0.3%
Total GHG (excl. sinks)	354	407	514	524	544	612	596	1.4%	2.4%	0.2%	0.4%	1.2%	-0.3%
Total GHG (energy, industry, agriculture)	350	404	513	511	536	581	564	1.4%	2.4%	0.0%	0.5%	0.8%	-0.3%
CO <sub>2</sub>	278	326	429	424	461	502	490	1.6%	2.8%	-0.1%	0.8%	0.8%	-0.2%
CH <sub>4</sub>	51	57	63	65	53	56	52	1.2%	1.0%	0.2%	-2.0%	0.6%	-0.8%
N <sub>2</sub> O	20	19	18	19	20	21	21	-0.4%	-0.4%	0.6%	0.4%	0.4%	-0.1%
F gases	1	2	3	3	2	2	2	0.6%	5.2%	0.8%	-3.6%	0.9%	-1.2%
Total GHG from Energy and Industry	319	372	479	475	500	543	528	1.6%	2.6%	-0.1%	0.5%	0.8%	-0.3%
CO <sub>2</sub> Emissions from Fuel Comb.	257	306	408	392	424	455	442	1.8%	2.9%	-0.4%	0.8%	0.7%	-0.3%
Power generation/District heating	142	188	242	189	214	240	241	2.8%	2.6%	-2.4%	1.2%	1.2%	0.0%
Industry	35	33	45	36	35	35	32	-0.6%	3.1%	-2.3%	0.0%	-0.2%	-1.0%
Buildings	11	9	17	28	25	22	17	-2.2%	6.3%	5.0%	-1.0%	-1.3%	-2.3%
Agriculture	3	4	3	6	7	7	7	2.1%	-1.1%	6.2%	0.9%	0.7%	-0.1%
Transport	29	36	42	50	51	54	54	2.0%	1.5%	1.8%	0.2%	0.6%	-0.1%
Other	36	36	59	84	92	97	91	0.1%	5.0%	3.6%	0.9%	0.5%	-0.6%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	4	38	n.s.	n.s.	n.s.	n.s.	28.7%	24.7%
Coal	0	0	0	0	0	4	38	n.s.	n.s.	n.s.	n.s.	29.6%	24.9%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	19.8%	8.2%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	5.7%	3.2%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	110	151	165	164	264	346	371	3.2%	0.9%	-0.1%	4.9%	2.7%	0.7%
Coal	98	136	150	147	234	282	271	3.3%	1.0%	-0.2%	4.7%	1.9%	-0.4%
Oil	0	1	0	0	0	0	0	n.s.	-16.6%	1.9%	1.9%	1.0%	0.2%
Natural gas	2	1	0	1	8	35	67	-0.8%	-10.4%	9.3%	22.0%	15.4%	6.8%
Biomass	8	9	11	9	12	14	16	1.9%	1.4%	-1.4%	2.8%	1.5%	0.8%
Nuclear <sup>1</sup>	2	3	3	4	5	8	6	4.4%	-0.7%	2.3%	1.6%	5.1%	-1.9%
Hydro	0	0	0	1	1	1	1	3.3%	2.6%	2.4%	2.6%	1.8%	1.8%
Other renewables	0	0	0	2	4	6	9	n.s.	n.s.	35.6%	7.3%	4.7%	4.1%
Net Imports	-22	-45	-25	-38	-123	-187	-205						
Coal	-30	-54	-48	-67	-146	-188	-174						
Oil	8	8	20	23	21	22	20						
Natural gas	-1	0	3	4	1	-22	-52						
Biomass	0	0	0	2	2	1	1						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	1	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	88	107	140	126	141	158	166	2.0%	2.8%	-1.0%	1.1%	1.1%	0.5%
Coal	69	82	102	81	88	93	97	1.8%	2.2%	-2.3%	0.9%	0.6%	0.4%
Oil	8	9	20	23	21	22	21	0.3%	8.5%	1.6%	-0.8%	0.3%	-0.6%
Natural gas	0	1	4	5	9	13	15	10.9%	10.7%	2.4%	6.5%	3.6%	1.6%
Biomass	8	9	11	12	14	16	16	1.9%	1.4%	0.8%	2.0%	1.0%	0.5%
Nuclear <sup>1</sup>	2	3	3	4	5	8	6	4.4%	-0.7%	2.3%	1.6%	5.1%	-1.9%
Hydro	0	0	0	1	1	1	1	3.3%	2.6%	2.4%	2.6%	1.8%	1.8%
Other renewables	0	0	0	2	4	6	9	n.s.	n.s.	35.6%	7.3%	4.7%	4.1%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	88	107	140	126	141	158	166	2.0%	2.8%	-1.0%	1.1%	1.1%	0.5%
Energy for Power Generation	38	51	64	55	66	81	92	3.0%	2.4%	-1.6%	1.8%	2.1%	1.3%
Other Energy Transformation & Losses	10	14	23	16	20	23	25	3.9%	5.1%	-3.4%	2.0%	1.5%	0.9%
Final consumption	52	57	70	72	79	87	88	0.8%	2.1%	0.3%	1.0%	0.9%	0.2%
Steel, Non-Met. Minerals and Chem.	10	7	10	10	12	12	12	-3.5%	3.4%	0.0%	1.7%	0.4%	-0.7%
Other Industry	13	14	18	15	16	17	17	1.0%	2.7%	-1.8%	0.7%	0.4%	0.0%
Non-Energy Use	4	6	4	2	2	2	2	2.8%	-2.6%	-5.8%	-0.1%	0.4%	-0.4%
Residential	10	12	15	16	16	16	14	1.5%	2.2%	0.9%	-0.1%	-0.2%	-0.9%
Services	3	4	5	6	7	9	10	2.5%	1.8%	2.6%	1.6%	1.9%	1.0%
Agriculture	1	2	2	2	3	3	4	1.8%	0.3%	4.3%	1.6%	1.6%	1.2%
Road	9	11	15	18	21	24	26	1.8%	3.0%	1.9%	1.3%	1.6%	0.7%
Rail	0	1	0	0	1	1	1	5.2%	-6.5%	3.0%	1.8%	1.9%	1.0%
Aviation	0	1	1	1	2	2	3	5.2%	5.0%	1.8%	3.4%	3.5%	1.7%
Other Transport	0	0	0	0	0	0	0	n.s.	4.5%	32.2%	2.2%	2.0%	0.6%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

South Africa	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>36</b>	<b>47</b>	<b>61</b>	<b>48</b>	<b>56</b>	<b>66</b>	<b>75</b>	<b>2.9%</b>	<b>2.6%</b>	<b>-2.3%</b>	<b>1.6%</b>	<b>1.6%</b>	<b>1.3%</b>
Coal	36	47	61	47	51	57	62	2.8%	2.6%	-2.6%	0.9%	1.0%	0.8%
Oil	0	0	0	0	1	1	1	n.s.	n.s.	21.6%	4.6%	4.6%	3.3%
Gas	0	0	0	1	4	6	8	n.s.	n.s.	n.s.	18.5%	5.1%	2.4%
Biomass & Waste	0	0	0	0	1	2	5	n.s.	-0.7%	15.8%	9.3%	9.1%	6.6%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>167</b>	<b>211</b>	<b>260</b>	<b>243</b>	<b>320</b>	<b>416</b>	<b>490</b>	<b>2.3%</b>	<b>2.1%</b>	<b>-0.7%</b>	<b>2.8%</b>	<b>2.7%</b>	<b>1.7%</b>
Coal	156	193	242	196	228	270	298	2.2%	2.3%	-2.1%	1.5%	1.7%	1.0%
of which CCS	0	0	0	0	0	3	38	n.s.	n.s.	n.s.	n.s.	32.6%	27.8%
Oil	0	0	0	1	2	4	5	n.s.	n.s.	21.4%	4.8%	5.1%	3.6%
Gas	0	0	0	4	20	33	42	n.s.	n.s.	n.s.	16.7%	5.3%	2.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	19.7%	11.5%
Biomass & Waste	0	0	0	1	4	12	23	n.s.	-0.7%	16.3%	12.8%	10.4%	7.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	8	13	12	15	18	31	26	4.4%	-0.7%	2.3%	1.8%	5.4%	-1.8%
Hydro	3	4	5	6	8	10	12	3.3%	2.6%	2.4%	2.6%	1.8%	1.8%
Wind	0	0	0	12	23	32	47	n.s.	n.s.	n.s.	6.5%	3.2%	4.0%
Solar	0	0	0	7	16	26	35	n.s.	n.s.	41.1%	9.2%	4.7%	3.3%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	28.3%	18.4%	14.4%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>35</b>	<b>41</b>	<b>44</b>	<b>59</b>	<b>75</b>	<b>95</b>	<b>117</b>	<b>1.7%</b>	<b>0.7%</b>	<b>2.9%</b>	<b>2.5%</b>	<b>2.4%</b>	<b>2.1%</b>
Coal	31	37	38	39	40	43	48	1.8%	0.2%	0.3%	0.2%	0.8%	1.0%
of which CCS	0	0	0	0	0	0	5	n.s.	n.s.	n.s.	n.s.	32.6%	27.7%
Oil	0	0	0	0	0	1	1	29.8%	0.0%	-0.1%	0.1%	5.2%	3.7%
Gas	0	0	2	3	5	7	8	n.s.	n.s.	5.1%	3.0%	3.7%	1.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	19.8%	11.5%
Biomass & Waste	0	0	0	0	1	2	3	n.s.	0.0%	13.1%	11.2%	10.3%	7.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	2	2	2	2	2	4	3	0.0%	0.0%	0.3%	1.8%	5.4%	-1.8%
Hydro	2	2	2	3	4	5	6	0.3%	0.1%	4.2%	2.6%	1.8%	1.8%
Wind	0	0	0	5	10	13	19	n.s.	n.s.	n.s.	6.5%	3.3%	3.7%
Solar	0	0	0	6	14	22	30	n.s.	n.s.	47.5%	9.2%	4.6%	3.1%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.8%	13.9%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>52</b>	<b>57</b>	<b>70</b>	<b>72</b>	<b>79</b>	<b>87</b>	<b>88</b>	<b>0.8%</b>	<b>2.1%</b>	<b>0.3%</b>	<b>1.0%</b>	<b>0.9%</b>	<b>0.2%</b>
Coal	17	16	16	16	16	15	12	-0.9%	-0.1%	0.3%	0.3%	-1.0%	-1.8%
Oil	15	16	23	25	24	25	23	0.7%	3.6%	1.0%	-0.4%	0.2%	-0.5%
Gas	0	1	4	3	5	6	7	5.6%	15.2%	-0.1%	3.1%	2.8%	0.9%
Electricity	12	15	17	16	22	28	34	2.3%	1.5%	-0.6%	2.8%	2.7%	1.7%
Heat	0	0	0	0	0	1	2	n.s.	n.s.	13.5%	5.5%	10.3%	5.5%
Biomass & Other	8	9	11	11	12	11	10	1.8%	1.5%	0.1%	0.9%	-0.4%	-1.3%
Share of Renewables <sup>3</sup> (%)	16%	17%	16%	18%	21%	23%	27%	0.8%	-0.8%	1.2%	1.6%	1.0%	1.8%
<b>Industry (incl. non-energy use)</b>	<b>27</b>	<b>27</b>	<b>32</b>	<b>27</b>	<b>30</b>	<b>31</b>	<b>30</b>	<b>-0.2%</b>	<b>2.0%</b>	<b>-1.7%</b>	<b>1.0%</b>	<b>0.4%</b>	<b>-0.3%</b>
Coal	15	14	12	10	11	11	9	-0.4%	-1.5%	-2.3%	1.2%	-0.4%	-1.1%
Oil	4	2	4	4	3	3	2	-6.5%	9.4%	-2.1%	-1.8%	-1.1%	-2.5%
Gas	0	1	4	3	3	3	3	5.5%	15.6%	-1.4%	-0.3%	0.6%	-1.1%
Electricity	7	8	10	9	11	13	15	1.6%	2.2%	-0.9%	1.9%	1.6%	0.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	2	2	2	2	2	2	1.3%	1.6%	-1.9%	2.1%	-0.4%	-1.3%
<b>Buildings</b>	<b>14</b>	<b>16</b>	<b>20</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>24</b>	<b>1.7%</b>	<b>2.1%</b>	<b>1.4%</b>	<b>0.4%</b>	<b>0.4%</b>	<b>-0.2%</b>
Coal	2	1	3	6	5	4	3	-4.6%	8.3%	6.2%	-1.3%	-2.5%	-3.9%
Oil	1	1	1	1	1	1	1	5.1%	1.6%	-1.6%	-2.8%	-0.4%	-0.7%
Gas	0	0	0	0	1	1	2	8.2%	-4.5%	25.3%	12.5%	6.8%	2.4%
Electricity	4	6	6	6	8	10	12	3.4%	0.7%	-0.3%	2.4%	2.9%	1.9%
Heat	0	0	0	0	0	1	2	n.s.	n.s.	13.5%	5.5%	10.3%	5.5%
Biomass & Other	6	8	9	9	9	7	5	1.9%	1.4%	0.2%	-0.4%	-2.1%	-4.0%
<b>Agriculture</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>1.8%</b>	<b>0.3%</b>	<b>4.3%</b>	<b>1.6%</b>	<b>1.6%</b>	<b>1.2%</b>
Coal	0	0	0	0	0	0	0	3.3%	-0.3%	23.1%	-0.5%	-0.9%	-1.5%
Oil	1	1	1	1	2	2	2	2.1%	-1.2%	4.0%	1.3%	1.0%	0.2%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	1	1	1	1	1	0.8%	4.1%	0.6%	2.6%	2.8%	2.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	11.5%	7.8%
<b>Transport</b>	<b>10</b>	<b>12</b>	<b>16</b>	<b>20</b>	<b>23</b>	<b>27</b>	<b>30</b>	<b>2.1%</b>	<b>2.8%</b>	<b>2.0%</b>	<b>1.4%</b>	<b>1.8%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	10	12	16	19	19	19	19	2.1%	3.0%	1.7%	-0.2%	0.3%	-0.3%
Gas	0	0	0	0	1	2	2	n.s.	n.s.	n.s.	17.5%	5.0%	2.6%
Electricity	0	0	0	0	2	4	5	2.9%	-4.1%	2.6%	17.8%	7.1%	3.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	17.0%	6.8%	3.5%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>10</b>	<b>14</b>	<b>23</b>	<b>16</b>	<b>20</b>	<b>23</b>	<b>25</b>	<b>3.9%</b>	<b>5.1%</b>	<b>-3.4%</b>	<b>2.0%</b>	<b>1.5%</b>	<b>0.9%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Rest Sub Saharan Africa	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	475	625	825	1 084	1 393	1 749	2 138	2.8%	2.8%	2.8%	2.5%	2.3%	2.0%
GDP per capita (ppp, k\$'05)	1	1	1	2	3	4	6	-0.3%	3.6%	3.0%	3.8%	4.0%	4.0%
GDP per capita (mer, k\$'05)	1	0	1	1	1	2	3	-0.5%	3.5%	2.9%	3.8%	4.0%	4.0%
Share Value Added - Agriculture (%)	31	27	22	14	9	7	5	-1.5%	-1.7%	-4.5%	-4.4%	-3.2%	-2.2%
Share Value Added - Industry (%)	29	34	36	39	41	42	41	1.7%	0.7%	0.6%	0.6%	0.2%	-0.2%
Share Value Added - Services (%)	40	40	41	47	50	51	53	-0.2%	0.5%	1.4%	0.5%	0.3%	0.4%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	13	15	18	-6.5%	7.4%	-4.3%	0.9%	1.5%	1.4%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	18	21	30	38	51	65	84	1.4%	3.8%	2.3%	3.0%	2.6%	2.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	1 707	1 843	1 880	2 495	2 810	3 801	3 566	0.8%	0.2%	2.9%	1.2%	3.1%	-0.6%
Total GHG (excl. sinks)	1 707	1 843	1 880	2 495	2 810	3 801	4 152	0.8%	0.2%	2.9%	1.2%	3.1%	0.9%
Total GHG (energy, industry, agriculture)	635	760	886	1 261	1 635	2 315	2 838	1.8%	1.5%	3.6%	2.6%	3.5%	2.1%
CO <sub>2</sub>	166	210	243	451	814	1 318	1 818	2.4%	1.5%	6.4%	6.1%	4.9%	3.3%
CH <sub>4</sub>	310	394	454	605	607	760	793	2.4%	1.4%	2.9%	0.0%	2.3%	0.4%
N <sub>2</sub> O	157	155	186	202	209	230	218	-0.2%	1.9%	0.8%	0.3%	1.0%	-0.5%
F gases	2	2	2	4	4	7	10	-0.2%	3.7%	5.0%	0.8%	5.2%	3.1%
Total GHG from Energy and Industry	335	401	461	814	1 194	1 858	2 451	1.8%	1.4%	5.9%	3.9%	4.5%	2.8%
CO <sub>2</sub> Emissions from Fuel Comb.	105	132	194	360	613	967	1 316	2.3%	4.0%	6.4%	5.5%	4.7%	3.1%
Power generation/District heating	20	27	41	102	196	322	411	3.1%	4.1%	9.7%	6.7%	5.1%	2.5%
Industry	22	20	30	58	109	169	212	-1.1%	4.2%	6.8%	6.6%	4.5%	2.3%
Buildings	13	17	24	37	54	79	109	2.7%	3.4%	4.4%	4.0%	3.8%	3.3%
Agriculture	2	4	4	5	6	7	7	6.3%	0.3%	2.2%	1.5%	1.4%	0.9%
Transport	38	52	81	134	207	321	470	3.2%	4.5%	5.1%	4.4%	4.5%	3.9%
Other	9	11	14	24	41	69	107	2.1%	2.3%	5.5%	5.6%	5.4%	4.4%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	5	46	n.s.	n.s.	n.s.	n.s.	27.1%	24.0%
Coal	0	0	0	0	0	5	44	n.s.	n.s.	n.s.	n.s.	28.6%	24.3%
Gas	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	18.3%	17.7%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	2.3%	15.9%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	303	397	582	622	720	820	930	2.7%	3.9%	0.7%	1.5%	1.3%	1.3%
Coal	5	5	3	39	15	21	27	-0.9%	-3.6%	28.5%	-9.3%	3.8%	2.6%
Oil	146	190	283	303	301	306	313	2.7%	4.1%	0.7%	-0.1%	0.1%	0.2%
Natural gas	4	12	46	58	93	116	136	11.5%	14.8%	2.4%	4.8%	2.2%	1.6%
Biomass	144	185	240	204	282	333	380	2.5%	2.6%	-1.6%	3.3%	1.7%	1.3%
Nuclear <sup>1</sup>	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	21.5%	20.7%
Hydro	4	5	8	9	10	12	14	3.1%	4.5%	1.0%	1.7%	1.6%	1.8%
Other renewables	0	0	1	10	18	32	58	3.0%	13.1%	22.3%	6.7%	5.5%	6.3%
Net Imports	- 120	- 160	- 261	- 206	- 173	- 118	- 38						
Coal	0	0	0	- 21	30	59	75						
Oil	- 120	- 156	- 229	- 221	- 185	- 141	- 82						
Natural gas	0	- 4	- 32	- 29	- 38	- 20	14						
Biomass	0	0	0	67	28	- 9	- 41						
Biofuels	0	0	0	- 2	- 7	- 7	- 5						
Electricity	0	0	0	1	1	1	1						
Primary Energy Demand <sup>2</sup>	183	236	321	417	547	702	891	2.6%	3.1%	2.6%	2.8%	2.5%	2.4%
Coal	5	4	4	17	44	80	102	-2.0%	-1.5%	17.2%	9.8%	6.1%	2.5%
Oil	26	34	54	82	116	165	232	2.8%	4.7%	4.3%	3.5%	3.5%	3.5%
Natural gas	4	8	14	29	55	96	150	7.2%	6.1%	7.6%	6.6%	5.7%	4.6%
Biomass	144	185	240	271	310	324	339	2.5%	2.6%	1.2%	1.3%	0.4%	0.4%
Nuclear <sup>1</sup>	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	21.5%	20.7%
Hydro	4	5	8	9	10	12	14	3.1%	4.5%	1.0%	1.7%	1.6%	1.8%
Other renewables	0	0	1	10	18	32	58	3.0%	13.1%	22.3%	6.7%	5.5%	6.3%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	183	236	321	417	547	702	891	2.6%	3.1%	2.6%	2.8%	2.5%	2.4%
Energy for Power Generation	11	15	24	53	92	148	227	3.5%	4.9%	8.1%	5.7%	4.9%	4.4%
Other Energy Transformation & Losses	3	4	6	12	29	46	74	2.4%	3.9%	6.9%	9.5%	4.7%	4.9%
Final consumption	174	223	301	372	465	577	711	2.6%	3.0%	2.1%	2.2%	2.2%	2.1%
Steel, Non-Met. Minerals and Chem.	2	1	1	3	9	14	16	-3.9%	0.1%	11.2%	9.9%	5.1%	1.4%
Other Industry	14	17	28	41	58	81	109	2.4%	5.0%	3.8%	3.7%	3.4%	2.9%
Non-Energy Use	1	1	2	3	6	12	20	0.8%	4.4%	6.5%	6.7%	6.2%	5.3%
Residential	136	174	226	251	275	287	288	2.5%	2.7%	1.1%	0.9%	0.4%	0.1%
Services	6	9	10	18	28	43	66	3.3%	1.6%	5.8%	4.6%	4.5%	4.3%
Agriculture	1	2	2	3	3	4	4	4.6%	1.0%	1.8%	1.3%	1.5%	1.6%
Road	12	18	30	50	81	128	194	4.0%	5.4%	5.2%	4.9%	4.7%	4.2%
Rail	0	0	0	0	0	0	0	-5.7%	-0.8%	2.9%	1.8%	2.4%	2.8%
Aviation	0	0	1	2	3	6	11	4.2%	7.8%	6.5%	7.1%	7.2%	6.6%
Other Transport	0	0	0	0	1	1	2	-1.1%	2.2%	5.5%	5.3%	5.0%	4.5%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest Sub Saharan Africa	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>7</b>	<b>9</b>	<b>15</b>	<b>34</b>	<b>63</b>	<b>104</b>	<b>154</b>	<b>3.8%</b>	<b>4.7%</b>	<b>8.7%</b>	<b>6.3%</b>	<b>5.1%</b>	<b>4.0%</b>
Coal	2	2	1	12	30	56	71	-1.2%	-3.1%	23.7%	9.9%	6.3%	2.4%
Oil	2	3	6	9	12	14	22	4.3%	5.9%	3.8%	3.3%	1.0%	4.8%
Gas	2	4	7	12	16	25	41	7.1%	6.1%	5.6%	3.1%	4.8%	4.9%
Biomass & Waste	0	0	1	1	3	8	20	5.9%	5.0%	6.2%	12.1%	9.7%	9.4%
Other	0	0	0	1	1	1	1	2.9%	13.0%	21.6%	4.1%	0.5%	-0.4%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>66</b>	<b>90</b>	<b>148</b>	<b>266</b>	<b>486</b>	<b>868</b>	<b>1 455</b>	<b>3.1%</b>	<b>5.2%</b>	<b>6.0%</b>	<b>6.2%</b>	<b>6.0%</b>	<b>5.3%</b>
Coal	6	5	5	53	148	285	368	-1.5%	-1.4%	27.8%	10.8%	6.8%	2.6%
of which CCS	0	0	0	0	0	2	50	n.s.	n.s.	n.s.	n.s.	31.1%	36.7%
Oil	8	12	20	39	53	59	96	3.9%	5.4%	6.6%	3.3%	1.1%	4.9%
Gas	7	12	29	52	78	133	223	5.3%	8.9%	6.0%	4.0%	5.6%	5.3%
of which CCS	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	22.1%	20.3%
Biomass & Waste	0	1	1	3	14	38	99	6.4%	3.7%	9.8%	15.6%	10.7%	10.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	44	59	91	101	120	140	167	3.1%	4.5%	1.0%	1.7%	1.6%	1.8%
Wind	0	0	0	5	34	101	228	21.5%	8.6%	n.s.	20.9%	11.6%	8.5%
Solar	0	0	0	3	24	94	251	n.s.	32.1%	26.8%	23.9%	14.7%	10.4%
Other	0	0	1	10	16	18	23	2.9%	13.0%	21.6%	4.2%	1.2%	2.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>23</b>	<b>27</b>	<b>41</b>	<b>71</b>	<b>126</b>	<b>243</b>	<b>443</b>	<b>1.6%</b>	<b>4.2%</b>	<b>5.6%</b>	<b>5.9%</b>	<b>6.8%</b>	<b>6.2%</b>
Coal	2	2	2	8	22	43	58	-0.4%	1.3%	14.1%	11.3%	7.1%	3.0%
of which CCS	0	0	0	0	0	0	7	n.s.	n.s.	n.s.	n.s.	31.3%	36.9%
Oil	4	5	8	22	31	38	44	1.1%	5.1%	10.6%	3.8%	2.0%	1.4%
Gas	3	6	11	14	15	26	45	8.1%	6.6%	3.0%	0.2%	5.8%	5.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	22.5%	20.6%
Biomass & Waste	0	0	0	0	2	5	15	1.0%	5.9%	4.4%	15.2%	10.9%	10.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	15	15	20	22	26	31	37	0.3%	3.0%	1.0%	1.7%	1.6%	1.8%
Wind	0	0	0	2	14	42	94	n.s.	13.0%	n.s.	20.7%	11.5%	8.4%
Solar	0	0	0	2	14	56	147	n.s.	29.7%	28.2%	24.1%	14.6%	10.2%
Other	0	0	0	1	2	2	3	4.1%	12.0%	20.1%	3.7%	2.0%	3.3%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>174</b>	<b>223</b>	<b>301</b>	<b>372</b>	<b>465</b>	<b>577</b>	<b>711</b>	<b>2.6%</b>	<b>3.0%</b>	<b>2.1%</b>	<b>2.2%</b>	<b>2.2%</b>	<b>2.1%</b>
Coal	3	2	2	5	13	21	25	-2.5%	0.3%	9.7%	9.2%	5.1%	1.8%
Oil	21	29	46	71	101	148	206	2.9%	4.8%	4.5%	3.6%	3.8%	3.3%
Gas	1	2	4	10	26	48	74	5.3%	6.1%	11.0%	9.9%	6.4%	4.5%
Electricity	4	6	10	19	34	62	104	3.4%	5.6%	6.2%	6.1%	6.0%	5.3%
Heat	0	0	0	0	0	1	3	n.s.	n.s.	18.7%	33.1%	16.2%	14.9%
Biomass & Other	144	185	240	267	290	298	299	2.5%	2.6%	1.1%	0.8%	0.3%	0.0%
Share of Renewables <sup>3</sup> (%)	84%	84%	81%	73%	65%	56%	51%	0.0%	-0.3%	-1.0%	-1.2%	-1.4%	-0.9%
<b>Industry (incl. non-energy use)</b>	<b>16</b>	<b>20</b>	<b>31</b>	<b>47</b>	<b>73</b>	<b>107</b>	<b>145</b>	<b>1.7%</b>	<b>4.7%</b>	<b>4.3%</b>	<b>4.5%</b>	<b>3.9%</b>	<b>3.0%</b>
Coal	2	1	1	4	12	20	25	-3.4%	-1.2%	13.4%	10.6%	5.5%	2.0%
Oil	5	4	6	9	12	16	19	-0.3%	3.9%	3.6%	2.8%	2.7%	2.2%
Gas	1	1	4	7	15	25	35	2.3%	9.2%	7.8%	7.2%	5.3%	3.4%
Electricity	2	3	4	8	15	26	42	2.1%	4.2%	7.2%	6.0%	5.5%	4.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	7	10	16	18	19	20	23	3.9%	5.1%	1.4%	0.7%	0.4%	1.5%
<b>Buildings</b>	<b>143</b>	<b>183</b>	<b>236</b>	<b>269</b>	<b>303</b>	<b>330</b>	<b>354</b>	<b>2.5%</b>	<b>2.6%</b>	<b>1.3%</b>	<b>1.2%</b>	<b>0.9%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	0	0	-2.8%	6.1%	1.8%	-1.0%	-2.0%	-3.8%
Oil	4	5	7	9	10	11	13	2.4%	4.0%	2.8%	0.8%	1.3%	1.6%
Gas	0	0	0	2	9	18	28	n.s.	n.s.	n.s.	14.1%	7.1%	4.7%
Electricity	2	3	6	10	17	30	49	4.9%	7.0%	5.5%	5.4%	5.6%	5.2%
Heat	0	0	0	0	0	1	3	n.s.	n.s.	18.7%	33.1%	16.2%	14.9%
Biomass & Other	137	174	223	247	266	270	260	2.4%	2.5%	1.0%	0.7%	0.2%	-0.4%
<b>Agriculture</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>4.6%</b>	<b>1.0%</b>	<b>1.8%</b>	<b>1.3%</b>	<b>1.5%</b>	<b>1.6%</b>
Coal	0	0	0	0	0	0	0	6.1%	0.7%	0.4%	-0.4%	-0.7%	-1.5%
Oil	0	1	1	1	1	2	2	6.4%	0.0%	3.3%	2.3%	2.2%	1.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	1	1	2.9%	-0.7%	4.4%	3.7%	3.9%	4.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	1	1	1	1	1	1	3.2%	2.1%	0.7%	0.3%	0.6%	1.4%
<b>Transport</b>	<b>13</b>	<b>19</b>	<b>32</b>	<b>52</b>	<b>85</b>	<b>136</b>	<b>208</b>	<b>3.8%</b>	<b>5.3%</b>	<b>5.2%</b>	<b>5.0%</b>	<b>4.8%</b>	<b>4.3%</b>
Coal	0	0	0	0	0	0	0	-21.2%	1.4%	0.3%	0.0%	0.0%	0.0%
Oil	13	19	31	52	78	119	171	3.9%	5.3%	5.1%	4.2%	4.3%	3.7%
Gas	0	0	0	0	2	5	11	n.s.	n.s.	n.s.	26.6%	10.5%	7.7%
Electricity	0	0	0	0	2	5	11	n.s.	4.7%	33.4%	43.4%	13.1%	8.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	4	6	14	n.s.	n.s.	n.s.	21.4%	5.8%	8.5%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>12</b>	<b>29</b>	<b>46</b>	<b>74</b>	<b>2.4%</b>	<b>3.9%</b>	<b>6.9%</b>	<b>9.5%</b>	<b>4.7%</b>	<b>4.9%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Iran	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	56	66	74	83	89	91	92	1.6%	1.2%	1.2%	0.6%	0.3%	0.1%
GDP per capita (ppp, k\$'05)	6	7	11	11	17	24	31	2.1%	4.0%	0.4%	3.7%	3.7%	2.7%
GDP per capita (mer, k\$'05)	2	2	3	3	5	7	9	2.1%	3.8%	0.4%	3.7%	3.7%	2.7%
Share Value Added - Agriculture (%)	9	6	1	1	1	0	0	-5.1%	-15.7%	-5.4%	-1.3%	-0.9%	-0.5%
Share Value Added - Industry (%)	42	49	50	48	46	43	40	1.5%	0.1%	-0.3%	-0.5%	-0.7%	-0.7%
Share Value Added - Services (%)	48	45	49	51	54	57	60	-0.7%	0.9%	0.4%	0.4%	0.6%	0.5%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	21	23	-7.8%	10.3%	-2.2%	1.6%	1.4%	0.9%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	28	24	47	43	47	64	85	-1.2%	6.8%	-0.9%	0.9%	3.1%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	299	472	706	948	1 235	1 430	1 371	4.7%	4.1%	3.0%	2.7%	1.5%	-0.4%
Total GHG (excl. sinks)	299	472	709	949	1 240	1 431	1 380	4.6%	4.2%	3.0%	2.7%	1.4%	-0.4%
Total GHG (energy, industry, agriculture)	299	472	709	949	1 240	1 431	1 380	4.6%	4.2%	3.0%	2.7%	1.4%	-0.4%
CO <sub>2</sub>	221	367	568	789	1 064	1 281	1 227	5.2%	4.5%	3.3%	3.0%	1.9%	-0.4%
CH <sub>4</sub>	57	80	115	129	138	111	113	3.5%	3.8%	1.1%	0.7%	-2.1%	0.2%
N <sub>2</sub> O	19	23	23	29	35	37	38	1.6%	0.2%	2.4%	1.7%	0.7%	0.1%
F gases	3	2	2	2	3	2	1	-1.5%	-1.6%	2.3%	3.4%	-5.8%	-2.2%
Total GHG from Energy and Industry	267	433	668	898	1 183	1 371	1 319	5.0%	4.4%	3.0%	2.8%	1.5%	-0.4%
CO <sub>2</sub> Emissions from Fuel Comb.	191	332	512	720	972	1 173	1 117	5.7%	4.4%	3.5%	3.0%	1.9%	-0.5%
Power generation/District heating	36	69	131	188	308	428	418	6.8%	6.6%	3.7%	5.1%	3.3%	-0.2%
Industry	43	50	98	156	234	293	290	1.4%	6.9%	4.8%	4.1%	2.3%	-0.1%
Buildings	42	91	121	133	138	127	106	8.1%	2.8%	0.9%	0.4%	-0.8%	-1.8%
Agriculture	12	11	13	13	15	17	17	-0.8%	1.8%	-0.3%	1.4%	1.1%	0.0%
Transport	39	75	99	147	167	175	161	6.6%	2.9%	4.0%	1.3%	0.5%	-0.8%
Other	18	36	50	82	110	132	125	6.9%	3.4%	5.2%	2.9%	1.9%	-0.5%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	2	52	n.s.	n.s.	n.s.	3.2%	41.8%	41.6%
Coal	0	0	0	0	0	0	3	n.s.	n.s.	n.s.	3.4%	15.9%	43.4%
Gas	0	0	0	0	0	1	49	n.s.	n.s.	n.s.	3.1%	n.s.	41.9%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	3.1%	8.8%	0.9%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	184	240	343	443	634	820	889	2.7%	3.6%	2.6%	3.6%	2.6%	0.8%
Coal	1	1	1	1	1	2	2	3.5%	-0.6%	2.7%	3.2%	2.0%	0.4%
Oil	161	190	215	228	251	319	386	1.7%	1.2%	0.6%	1.0%	2.4%	1.9%
Natural gas	22	49	126	210	375	492	492	8.5%	9.9%	5.2%	6.0%	2.8%	0.0%
Biomass	0	0	1	2	3	3	3	-1.8%	16.4%	12.4%	3.3%	1.4%	0.0%
Nuclear <sup>1</sup>	0	0	0	1	1	1	1	n.s.	n.s.	n.s.	0.0%	0.0%	0.2%
Hydro	1	0	1	1	1	1	2	-5.0%	10.1%	4.4%	0.6%	0.7%	0.9%
Other renewables	0	0	0	0	0	1	3	n.s.	19.8%	8.3%	13.4%	14.0%	16.4%
Net Imports	- 114	- 117	- 135	- 141	- 221	- 322	- 389						
Coal	0	1	1	3	7	11	12						
Oil	- 110	- 121	- 132	- 111	- 100	- 139	- 217						
Natural gas	- 4	3	- 4	- 32	- 128	- 193	- 184						
Biomass	0	0	0	0	0	0	1						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	- 1	- 1	- 1	- 1						
Primary Energy Demand <sup>2</sup>	70	124	208	302	412	498	499	5.8%	5.3%	3.8%	3.2%	1.9%	0.0%
Coal	1	2	2	4	9	13	14	9.9%	0.8%	5.4%	9.0%	4.0%	0.5%
Oil	51	69	82	117	151	180	169	3.0%	1.8%	3.6%	2.6%	1.8%	-0.6%
Natural gas	17	53	122	178	248	299	308	11.7%	8.8%	3.8%	3.4%	1.9%	0.3%
Biomass	0	0	1	2	3	3	4	-1.8%	16.4%	9.3%	5.8%	2.8%	1.1%
Nuclear <sup>1</sup>	0	0	0	1	1	1	1	n.s.	n.s.	n.s.	0.0%	0.0%	0.2%
Hydro	1	0	1	1	1	1	2	-5.0%	10.1%	4.4%	0.6%	0.7%	0.9%
Other renewables	0	0	0	0	0	1	3	n.s.	19.8%	8.3%	13.4%	14.0%	16.4%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	70	124	208	302	412	498	499	5.8%	5.3%	3.8%	3.2%	1.9%	0.0%
Energy for Power Generation	14	27	52	75	123	171	188	7.2%	6.8%	3.8%	5.0%	3.4%	1.0%
Other Energy Transformation & Losses	6	11	16	30	43	53	54	5.3%	3.9%	6.6%	3.6%	2.2%	0.1%
Final consumption	54	94	156	222	292	341	336	5.6%	5.2%	3.6%	2.8%	1.6%	-0.1%
Steel, Non-Met. Minerals and Chem.	1	3	9	14	25	31	28	17.6%	12.0%	4.6%	5.9%	2.0%	-1.1%
Other Industry	14	16	30	47	66	82	85	1.7%	6.4%	4.7%	3.3%	2.2%	0.4%
Non-Energy Use	6	8	14	24	39	52	54	1.9%	6.0%	5.9%	4.9%	2.9%	0.4%
Residential	12	29	46	58	66	67	59	9.0%	4.7%	2.2%	1.3%	0.2%	-1.3%
Services	4	9	11	13	17	21	22	7.4%	2.4%	1.3%	3.0%	2.1%	0.3%
Agriculture	4	4	6	8	10	12	14	0.4%	4.0%	2.2%	1.9%	1.9%	1.6%
Road	13	24	39	58	69	76	74	6.3%	5.0%	4.0%	1.7%	1.0%	-0.2%
Rail	0	0	0	0	0	0	0	n.s.	36.8%	6.1%	3.1%	2.8%	1.9%
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other Transport	0	1	0	0	0	0	0	n.s.	-30.1%	2.8%	3.3%	0.8%	0.3%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Iran	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>13</b>	<b>27</b>	<b>51</b>	<b>73</b>	<b>120</b>	<b>168</b>	<b>183</b>	<b>7.5%</b>	<b>6.7%</b>	<b>3.6%</b>	<b>5.2%</b>	<b>3.4%</b>	<b>0.9%</b>
Coal	0	0	0	1	1	2	4	22.3%	-3.1%	18.2%	5.2%	9.2%	6.4%
Oil	6	7	13	21	32	41	36	1.5%	6.1%	4.8%	4.1%	2.7%	-1.4%
Gas	7	19	38	51	87	124	141	11.2%	7.0%	3.0%	5.5%	3.5%	1.3%
Biomass & Waste	0	0	0	0	0	1	1	n.s.	n.s.	10.0%	33.3%	15.4%	7.6%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>59</b>	<b>121</b>	<b>233</b>	<b>363</b>	<b>620</b>	<b>902</b>	<b>1 039</b>	<b>7.5%</b>	<b>6.7%</b>	<b>4.5%</b>	<b>5.5%</b>	<b>3.8%</b>	<b>1.4%</b>
Coal	0	0	0	2	4	12	22	22.2%	-3.1%	19.2%	7.8%	10.6%	6.5%
of which CCS	0	0	0	0	0	0	5	n.s.	n.s.	n.s.	n.s.	n.s.	55.3%
Oil	22	25	46	88	135	182	161	1.5%	6.1%	6.7%	4.4%	3.0%	-1.2%
Gas	31	92	177	253	457	677	803	11.5%	6.8%	3.6%	6.1%	4.0%	1.7%
of which CCS	0	0	0	0	0	3	126	n.s.	n.s.	n.s.	n.s.	n.s.	47.5%
Biomass & Waste	0	0	0	0	1	3	6	n.s.	n.s.	11.6%	35.5%	16.1%	8.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	6	6	6	6	n.s.	n.s.	n.s.	0.0%	0.0%	0.2%
Hydro	6	4	10	15	16	17	18	-5.0%	10.1%	4.4%	0.6%	0.7%	0.9%
Wind	0	0	0	0	1	5	17	n.s.	18.5%	6.0%	13.3%	13.9%	13.7%
Solar	0	0	0	0	0	2	6	n.s.	n.s.	19.7%	13.3%	13.1%	14.6%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	19.6%	17.8%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>18</b>	<b>34</b>	<b>61</b>	<b>79</b>	<b>113</b>	<b>161</b>	<b>195</b>	<b>6.5%</b>	<b>6.2%</b>	<b>2.6%</b>	<b>3.7%</b>	<b>3.6%</b>	<b>1.9%</b>
Coal	0	0	0	0	1	2	3	22.2%	-3.2%	2.6%	7.8%	10.7%	6.5%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	55.3%
Oil	6	8	13	16	23	35	34	3.5%	4.1%	2.6%	3.6%	4.3%	-0.3%
Gas	10	23	40	51	76	108	132	8.6%	5.8%	2.4%	4.2%	3.5%	2.0%
of which CCS	0	0	0	0	0	0	16	n.s.	n.s.	n.s.	n.s.	n.s.	47.9%
Biomass & Waste	0	0	0	0	0	0	1	n.s.	n.s.	-2.4%	35.7%	16.3%	8.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	1	1	1	1	n.s.	n.s.	n.s.	-0.2%	-0.2%	0.0%
Hydro	2	2	8	11	11	12	13	0.2%	15.6%	2.4%	0.6%	0.7%	0.9%
Wind	0	0	0	0	1	2	7	n.s.	n.s.	5.4%	12.7%	13.6%	13.4%
Solar	0	0	0	0	0	1	4	n.s.	n.s.	19.6%	13.0%	12.8%	14.5%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	17.2%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>54</b>	<b>94</b>	<b>156</b>	<b>222</b>	<b>292</b>	<b>341</b>	<b>336</b>	<b>5.6%</b>	<b>5.2%</b>	<b>3.6%</b>	<b>2.8%</b>	<b>1.6%</b>	<b>-0.1%</b>
Coal	0	1	1	1	4	6	5	7.4%	-0.8%	6.5%	10.3%	3.5%	-1.1%
Oil	40	56	63	82	103	119	114	3.3%	1.3%	2.6%	2.2%	1.5%	-0.4%
Gas	9	29	75	109	136	146	135	12.0%	10.0%	3.8%	2.2%	0.7%	-0.8%
Electricity	4	8	16	26	44	65	75	6.7%	7.0%	5.0%	5.5%	3.8%	1.4%
Heat	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	46.5%
Biomass & Other	0	0	1	4	5	6	6	-1.8%	16.3%	19.8%	2.7%	1.7%	1.0%
Share of Renewables <sup>3</sup> (%)	1%	1%	1%	1%	1%	2%	3%	-9.6%	6.9%	2.6%	0.9%	1.3%	5.0%
<b>Industry (incl. non-energy use)</b>	<b>21</b>	<b>27</b>	<b>53</b>	<b>86</b>	<b>130</b>	<b>164</b>	<b>167</b>	<b>2.7%</b>	<b>7.1%</b>	<b>5.0%</b>	<b>4.3%</b>	<b>2.4%</b>	<b>0.1%</b>
Coal	0	1	1	1	4	6	5	7.2%	-0.7%	6.6%	10.4%	3.5%	-1.1%
Oil	12	12	16	18	31	45	49	0.3%	2.6%	1.2%	5.7%	3.7%	0.8%
Gas	7	11	31	57	80	93	88	4.6%	11.2%	6.4%	3.5%	1.5%	-0.5%
Electricity	1	3	5	9	14	20	24	8.6%	6.7%	5.2%	4.7%	3.5%	1.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	0	n.s.	n.s.	n.s.	5.6%	1.2%	-3.6%
<b>Buildings</b>	<b>17</b>	<b>38</b>	<b>58</b>	<b>71</b>	<b>83</b>	<b>89</b>	<b>81</b>	<b>8.6%</b>	<b>4.2%</b>	<b>2.1%</b>	<b>1.6%</b>	<b>0.7%</b>	<b>-0.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	-7.3%	-1.4%	-2.3%	-3.3%	-5.9%
Oil	11	15	9	7	8	8	7	3.0%	-5.1%	-1.8%	0.1%	0.3%	-0.6%
Gas	3	19	40	47	49	44	35	21.7%	7.9%	1.7%	0.4%	-1.1%	-2.1%
Electricity	3	5	8	13	23	34	36	5.3%	6.5%	4.5%	5.8%	3.9%	0.5%
Heat	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	46.5%
Biomass & Other	0	0	1	3	4	3	2	-1.8%	16.3%	18.6%	0.9%	-1.1%	-2.8%
<b>Agriculture</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>12</b>	<b>14</b>	<b>0.4%</b>	<b>4.0%</b>	<b>2.2%</b>	<b>1.9%</b>	<b>1.9%</b>	<b>1.6%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	4	4	4	4	4	5	5	-0.8%	1.1%	-1.1%	1.4%	1.1%	0.0%
Gas	0	0	0	1	1	1	1	n.s.	n.s.	7.1%	1.4%	1.2%	0.3%
Electricity	0	1	2	4	5	6	8	9.4%	10.2%	5.7%	2.5%	2.6%	2.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	21.3%
<b>Transport</b>	<b>13</b>	<b>25</b>	<b>39</b>	<b>58</b>	<b>69</b>	<b>76</b>	<b>75</b>	<b>6.6%</b>	<b>4.8%</b>	<b>4.0%</b>	<b>1.7%</b>	<b>1.0%</b>	<b>-0.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	13	25	34	53	60	61	53	6.6%	3.4%	4.5%	1.1%	0.2%	-1.3%
Gas	0	0	5	4	6	8	10	n.s.	n.s.	-0.6%	3.1%	2.7%	2.8%
Electricity	0	0	0	0	3	5	8	n.s.	36.8%	20.6%	31.3%	7.2%	4.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	26.5%	10.6%	5.8%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>6</b>	<b>11</b>	<b>16</b>	<b>30</b>	<b>43</b>	<b>53</b>	<b>54</b>	<b>5.3%</b>	<b>3.9%</b>	<b>6.6%</b>	<b>3.6%</b>	<b>2.2%</b>	<b>0.1%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

<b>Saudi Arabia</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	16	21	28	34	39	43	46	2.7%	2.8%	2.0%	1.3%	1.0%	0.7%
GDP per capita (ppp, k\$'05)	19	19	24	27	31	37	41	0.0%	2.5%	1.2%	1.4%	1.7%	1.1%
GDP per capita (mer, k\$'05)	12	12	15	17	20	24	26	0.0%	2.3%	1.4%	1.4%	1.7%	1.1%
Share Value Added - Agriculture (%)	9	6	1	1	1	1	1	-5.1%	-15.7%	-5.4%	-0.2%	-0.2%	-0.1%
Share Value Added - Industry (%)	42	49	50	50	48	46	44	1.5%	0.1%	0.2%	-0.4%	-0.6%	-0.4%
Share Value Added - Services (%)	48	45	49	49	51	54	56	-0.7%	0.9%	-0.1%	0.4%	0.5%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	21	23	-7.8%	10.3%	-2.2%	1.6%	1.4%	0.9%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	28	24	47	43	47	64	85	-1.2%	6.8%	-0.9%	0.9%	3.1%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	213	324	551	729	786	684	600	4.3%	5.5%	2.8%	0.8%	-1.4%	-1.3%
Total GHG (excl. sinks)	213	324	551	729	787	685	602	4.3%	5.5%	2.8%	0.8%	-1.4%	-1.3%
Total GHG (energy, industry, agriculture)	213	324	551	729	787	685	602	4.3%	5.5%	2.8%	0.8%	-1.4%	-1.3%
CO <sub>2</sub>	174	274	483	629	688	615	535	4.7%	5.8%	2.7%	0.9%	-1.1%	-1.4%
CH <sub>4</sub>	31	43	60	90	89	63	59	3.5%	3.4%	4.1%	-0.1%	-3.3%	-0.7%
N <sub>2</sub> O	6	6	8	10	10	7	7	0.2%	1.6%	2.3%	0.5%	-3.5%	-0.2%
F gases	2	0	0	0	0	0	0	-26.3%	11.7%	0.2%	0.1%	-8.7%	-0.8%
Total GHG from Energy and Industry	208	319	547	723	781	679	595	4.4%	5.5%	2.8%	0.8%	-1.4%	-1.3%
CO <sub>2</sub> Emissions from Fuel Comb.	158	248	434	560	605	528	447	4.6%	5.8%	2.6%	0.8%	-1.3%	-1.7%
Power generation/District heating	58	103	180	212	212	176	122	5.9%	5.7%	1.7%	0.0%	-1.8%	-3.6%
Industry	30	57	113	155	177	166	154	6.7%	7.2%	3.2%	1.4%	-0.7%	-0.7%
Buildings	3	4	5	8	13	15	14	2.9%	2.0%	5.1%	5.4%	1.2%	-0.5%
Agriculture	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Transport	49	61	107	156	171	141	127	2.1%	5.8%	3.9%	0.9%	-1.9%	-1.1%
Other	18	23	30	29	33	31	31	2.5%	2.4%	-0.1%	1.0%	-0.4%	-0.1%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	31	94	n.s.	n.s.	n.s.	n.s.	n.s.	11.7%
Coal	0	0	0	0	0	2	8	n.s.	n.s.	n.s.	n.s.	n.s.	14.4%
Gas	0	0	0	0	0	29	85	n.s.	n.s.	n.s.	n.s.	n.s.	11.5%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	23.5%	19.5%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	378	508	570	842	915	1 115	1 183	3.0%	1.1%	4.0%	0.8%	2.0%	0.6%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	350	467	497	742	744	855	890	2.9%	0.6%	4.1%	0.0%	1.4%	0.4%
Natural gas	28	41	73	99	171	258	286	4.0%	5.9%	3.2%	5.6%	4.2%	1.1%
Biomass	0	0	0	1	1	1	1	-9.3%	2.9%	57.1%	4.3%	4.2%	0.9%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	8.0%
Hydro	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other renewables	0	0	0	0	0	2	5	n.s.	n.s.	n.s.	19.8%	33.6%	9.2%
Net Imports	- 316	- 409	- 383	- 601	- 648	- 854	- 925						
Coal	0	0	0	0	1	3	5						
Oil	- 308	- 399	- 370	- 599	- 604	- 732	- 775						
Natural gas	- 8	- 10	- 13	- 2	- 44	- 125	- 154						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	62	99	187	241	268	261	258	4.8%	6.5%	2.6%	1.1%	-0.3%	-0.1%
Coal	0	0	0	0	1	3	5	n.s.	n.s.	n.s.	12.1%	9.5%	4.5%
Oil	43	68	127	143	140	123	115	4.8%	6.4%	1.2%	-0.3%	-1.3%	-0.7%
Natural gas	19	31	60	97	126	133	133	4.7%	6.9%	4.9%	2.7%	0.5%	0.0%
Biomass	0	0	0	0	1	1	2	-9.5%	2.9%	54.5%	5.5%	5.0%	2.3%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	8.0%
Hydro	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other renewables	0	0	0	0	0	2	5	n.s.	n.s.	n.s.	19.8%	33.6%	9.2%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	62	99	187	241	268	261	258	4.8%	6.5%	2.6%	1.1%	-0.3%	-0.1%
Energy for Power Generation	22	37	65	81	83	85	89	5.6%	5.7%	2.2%	0.3%	0.2%	0.5%
Other Energy Transformation & Losses	6	7	20	15	17	18	19	1.8%	10.5%	-2.3%	0.9%	0.4%	0.6%
Final consumption	39	63	120	169	196	193	190	4.9%	6.6%	3.5%	1.5%	-0.1%	-0.2%
Steel, Non-Met. Minerals and Chem.	0	0	1	2	2	2	3	n.s.	n.s.	3.9%	1.3%	0.6%	0.5%
Other Industry	6	11	19	28	32	34	33	6.6%	5.8%	3.8%	1.4%	0.5%	0.0%
Non-Energy Use	12	23	48	65	77	76	73	6.6%	7.4%	3.1%	1.7%	-0.2%	-0.5%
Residential	3	6	11	14	16	18	19	5.9%	6.0%	2.9%	1.3%	1.0%	0.5%
Services	1	2	5	8	10	12	13	5.3%	8.2%	4.1%	2.4%	1.7%	0.9%
Agriculture	0	0	0	0	1	1	1	9.2%	4.8%	3.2%	2.1%	2.0%	1.7%
Road	16	19	34	50	56	50	48	2.2%	5.8%	3.9%	1.2%	-1.2%	-0.4%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Aviation	1	1	1	1	1	1	1	2.0%	1.0%	3.0%	-0.2%	-4.1%	-1.1%
Other Transport	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

<b>Saudi Arabia</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>22</b>	<b>37</b>	<b>65</b>	<b>81</b>	<b>83</b>	<b>83</b>	<b>84</b>	<b>5.6%</b>	<b>5.7%</b>	<b>2.2%</b>	<b>0.2%</b>	<b>0.0%</b>	<b>0.2%</b>
Coal	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	12.1%	10.2%	5.6%
Oil	9	19	35	28	21	12	13	7.7%	6.0%	-2.0%	-3.0%	-5.4%	0.8%
Gas	12	18	30	52	61	69	68	3.7%	5.3%	5.6%	1.6%	1.2%	-0.1%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	19.0%	7.9%	3.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>69</b>	<b>126</b>	<b>240</b>	<b>351</b>	<b>391</b>	<b>443</b>	<b>493</b>	<b>6.2%</b>	<b>6.6%</b>	<b>3.9%</b>	<b>1.1%</b>	<b>1.3%</b>	<b>1.1%</b>
Coal	0	0	0	1	3	9	15	n.s.	n.s.	n.s.	12.4%	10.2%	5.5%
of which CCS	0	0	0	0	0	3	11	n.s.	n.s.	n.s.	n.s.	n.s.	14.7%
Oil	34	68	129	117	88	51	56	7.2%	6.6%	-1.0%	-2.8%	-5.3%	0.8%
Gas	35	58	111	233	298	369	385	5.1%	6.7%	7.7%	2.5%	2.2%	0.4%
of which CCS	0	0	0	0	0	83	245	n.s.	n.s.	n.s.	n.s.	n.s.	11.4%
Biomass & Waste	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	20.0%	8.3%	3.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Wind	0	0	0	0	1	6	14	n.s.	n.s.	n.s.	15.9%	25.6%	8.2%
Solar	0	0	0	0	0	7	22	n.s.	n.s.	n.s.	21.7%	34.3%	12.1%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	27.7%	23.6%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>24</b>	<b>31</b>	<b>60</b>	<b>85</b>	<b>84</b>	<b>96</b>	<b>100</b>	<b>2.6%</b>	<b>6.8%</b>	<b>3.6%</b>	<b>-0.1%</b>	<b>1.4%</b>	<b>0.3%</b>
Coal	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	12.5%	10.4%	5.1%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	14.5%
Oil	13	18	33	39	30	23	20	3.2%	6.4%	1.7%	-2.7%	-2.7%	-1.1%
Gas	11	13	27	46	53	66	59	1.9%	7.2%	5.4%	1.5%	2.2%	-1.1%
of which CCS	0	0	0	0	0	11	31	n.s.	n.s.	n.s.	n.s.	n.s.	11.4%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	20.1%	8.4%	3.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	1.6%	0.5%
Wind	0	0	0	0	0	3	5	n.s.	n.s.	n.s.	15.7%	25.3%	8.1%
Solar	0	0	0	0	0	4	13	n.s.	n.s.	n.s.	21.8%	34.4%	12.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	23.1%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>39</b>	<b>63</b>	<b>120</b>	<b>169</b>	<b>196</b>	<b>193</b>	<b>190</b>	<b>4.9%</b>	<b>6.6%</b>	<b>3.5%</b>	<b>1.5%</b>	<b>-0.1%</b>	<b>-0.2%</b>
Coal	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	12.1%	7.6%	1.5%
Oil	28	43	75	104	107	100	92	4.3%	5.7%	3.3%	0.4%	-0.7%	-0.9%
Gas	6	12	27	41	60	58	58	6.4%	9.0%	4.0%	4.0%	-0.4%	0.0%
Electricity	5	9	17	24	28	33	36	6.1%	7.4%	3.2%	1.5%	1.6%	1.0%
Heat	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	45.8%	7.0%
Biomass & Other	0	0	0	0	1	1	2	-9.6%	2.9%	52.6%	5.8%	5.1%	4.4%
Share of Renewables <sup>3</sup> (%)	0%	0%	0%	0%	0%	2%	5%	n.s.	n.s.	n.s.	2.7%	17.5%	8.5%
<b>Industry (incl. non-energy use)</b>	<b>18</b>	<b>34</b>	<b>69</b>	<b>95</b>	<b>112</b>	<b>112</b>	<b>109</b>	<b>6.6%</b>	<b>7.2%</b>	<b>3.3%</b>	<b>1.6%</b>	<b>0.0%</b>	<b>-0.3%</b>
Coal	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	12.1%	7.6%	1.5%
Oil	11	22	39	51	52	55	52	6.9%	6.0%	2.8%	0.1%	0.6%	-0.5%
Gas	6	12	27	40	54	51	49	6.4%	9.0%	3.8%	3.2%	-0.7%	-0.2%
Electricity	1	1	2	4	5	5	6	4.2%	8.7%	4.6%	2.1%	1.2%	1.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-0.1%	-3.2%	-4.5%
<b>Buildings</b>	<b>5</b>	<b>8</b>	<b>16</b>	<b>22</b>	<b>26</b>	<b>30</b>	<b>32</b>	<b>5.7%</b>	<b>6.7%</b>	<b>3.3%</b>	<b>1.7%</b>	<b>1.2%</b>	<b>0.6%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	1	2	2	2	1	2.9%	2.0%	1.7%	-1.1%	-0.3%	-1.7%
Gas	0	0	0	1	3	4	4	n.s.	n.s.	n.s.	14.2%	2.1%	0.1%
Electricity	4	7	15	20	21	23	25	6.3%	7.3%	2.9%	0.8%	0.9%	0.6%
Heat	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	45.8%	7.0%
Biomass & Other	0	0	0	0	0	0	0	-9.6%	2.9%	37.0%	7.2%	0.1%	-1.0%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>9.2%</b>	<b>4.8%</b>	<b>3.2%</b>	<b>2.1%</b>	<b>2.0%</b>	<b>1.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	1	1	1	9.2%	4.8%	3.2%	2.1%	2.0%	1.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>16</b>	<b>20</b>	<b>35</b>	<b>51</b>	<b>57</b>	<b>51</b>	<b>48</b>	<b>2.2%</b>	<b>5.6%</b>	<b>3.9%</b>	<b>1.2%</b>	<b>-1.3%</b>	<b>-0.5%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	16	20	35	51	54	43	38	2.2%	5.6%	3.9%	0.6%	-2.1%	-1.3%
Gas	0	0	0	0	2	3	4	n.s.	n.s.	n.s.	29.6%	3.6%	2.8%
Electricity	0	0	0	0	1	3	5	n.s.	n.s.	n.s.	38.7%	10.6%	3.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	33.9%	14.6%	7.3%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>6</b>	<b>7</b>	<b>20</b>	<b>15</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>1.8%</b>	<b>10.5%</b>	<b>-2.3%</b>	<b>0.9%</b>	<b>0.4%</b>	<b>0.6%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Turkey	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	54	63	72	82	88	93	96	1.6%	1.3%	1.3%	0.6%	0.6%	0.3%
GDP per capita (ppp, k\$'05)	8	10	13	16	21	27	31	2.0%	2.5%	2.5%	2.8%	2.2%	1.6%
GDP per capita (mer, k\$'05)	5	6	8	10	13	17	19	2.0%	2.5%	2.6%	2.8%	2.2%	1.6%
Share Value Added - Agriculture (%)	18	11	10	9	8	8	7	-4.6%	-1.6%	-1.2%	-0.7%	-0.5%	-0.3%
Share Value Added - Industry (%)	32	31	27	26	25	24	23	-0.2%	-1.5%	-0.2%	-0.5%	-0.5%	-0.4%
Share Value Added - Services (%)	50	57	63	65	67	69	70	1.4%	1.0%	0.3%	0.3%	0.2%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	13	15	18	-6.5%	7.4%	-4.3%	0.9%	1.5%	1.4%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	18	21	30	38	51	65	84	1.4%	3.8%	2.3%	3.0%	2.6%	2.5%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	141	242	315	434	555	501	416	5.6%	2.7%	3.2%	2.5%	-1.0%	-1.8%
Total GHG (excl. sinks)	185	292	373	477	594	571	509	4.7%	2.5%	2.5%	2.2%	-0.4%	-1.1%
Total GHG (energy, industry, agriculture)	185	292	373	477	590	571	509	4.7%	2.5%	2.5%	2.1%	-0.3%	-1.1%
CO <sub>2</sub>	138	220	297	389	496	499	445	4.8%	3.1%	2.7%	2.5%	0.1%	-1.1%
CH <sub>4</sub>	34	53	57	65	68	52	43	4.7%	0.7%	1.3%	0.5%	-2.6%	-1.9%
N <sub>2</sub> O	12	17	14	17	19	18	18	3.4%	-1.9%	1.6%	1.3%	-0.7%	0.1%
F gases	1	2	5	6	7	2	2	10.6%	11.4%	2.1%	1.1%	-10.2%	-0.2%
Total GHG from Energy and Industry	155	265	346	441	551	534	473	5.5%	2.7%	2.5%	2.2%	-0.3%	-1.2%
CO <sub>2</sub> Emissions from Fuel Comb.	122	199	260	341	439	437	382	5.0%	2.7%	2.7%	2.5%	-0.1%	-1.3%
Power generation/District heating	31	68	96	135	217	221	192	8.1%	3.6%	3.4%	4.9%	0.2%	-1.4%
Industry	30	54	48	51	61	62	56	6.2%	-1.1%	0.6%	1.7%	0.2%	-1.0%
Buildings	23	27	49	47	45	37	26	1.6%	6.2%	-0.3%	-0.5%	-1.9%	-3.5%
Agriculture	6	8	14	13	14	15	13	3.4%	5.4%	-1.2%	1.4%	0.4%	-1.1%
Transport	26	34	43	82	84	82	77	2.6%	2.3%	6.6%	0.3%	-0.2%	-0.7%
Other	6	8	10	14	18	20	18	2.8%	2.3%	3.8%	2.7%	0.6%	-0.7%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	9	52	n.s.	n.s.	n.s.	n.s.	n.s.	19.2%
Coal	0	0	0	0	0	9	51	n.s.	n.s.	n.s.	n.s.	n.s.	19.2%
Gas	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	40.0%	18.0%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	13.8%	19.1%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	25	27	32	52	66	82	96	0.9%	1.8%	4.9%	2.4%	2.1%	1.6%
Coal	12	15	19	18	22	19	18	2.0%	2.8%	-0.4%	1.6%	-1.3%	-0.3%
Oil	4	3	2	2	3	3	2	-2.8%	-1.0%	-1.4%	2.1%	-0.4%	-1.1%
Natural gas	0	1	1	1	2	4	6	11.6%	0.7%	4.7%	6.9%	8.2%	4.4%
Biomass	7	7	5	15	17	22	27	-1.0%	-3.5%	12.8%	0.9%	3.0%	2.0%
Nuclear <sup>1</sup>	0	0	0	0	0	2	4	n.s.	n.s.	n.s.	19.2%	15.4%	7.8%
Hydro	2	3	4	6	7	8	8	2.9%	5.3%	2.4%	2.1%	1.3%	0.7%
Other renewables	0	0	1	10	16	24	30	13.1%	14.3%	23.1%	5.0%	4.0%	2.0%
Net Imports	26	51	72	88	110	112	106						
Coal	4	10	14	29	49	49	47						
Oil	19	28	28	36	37	36	32						
Natural gas	3	12	31	30	31	35	32						
Biomass	0	0	0	-7	-8	-8	-7						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	51	78	105	140	176	194	202	4.3%	3.0%	3.0%	2.3%	1.0%	0.4%
Coal	16	24	33	47	70	68	66	4.4%	3.0%	3.7%	4.0%	-0.4%	-0.3%
Oil	23	31	30	38	39	38	35	3.0%	-0.3%	2.3%	0.4%	-0.2%	-1.0%
Natural gas	3	13	31	31	33	38	38	16.0%	9.5%	-0.3%	0.7%	1.5%	-0.1%
Biomass	7	7	5	8	9	14	20	-1.0%	-3.5%	5.6%	1.3%	4.4%	3.7%
Nuclear <sup>1</sup>	0	0	0	0	0	2	4	n.s.	n.s.	n.s.	19.2%	15.4%	7.8%
Hydro	2	3	4	6	7	8	8	2.9%	5.3%	2.4%	2.1%	1.3%	0.7%
Other renewables	0	0	1	10	16	24	30	13.1%	14.3%	23.1%	5.0%	4.0%	2.0%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	51	78	105	140	176	194	202	4.3%	3.0%	3.0%	2.3%	1.0%	0.4%
Energy for Power Generation	11	24	37	55	86	103	117	7.9%	4.6%	4.0%	4.5%	1.8%	1.3%
Other Energy Transformation & Losses	3	5	5	9	11	13	14	4.0%	0.5%	6.6%	1.7%	1.3%	1.0%
Final consumption	41	59	80	100	117	127	130	3.7%	3.1%	2.3%	1.5%	0.9%	0.2%
Steel, Non-Met. Minerals and Chem.	5	6	9	15	18	17	15	2.1%	4.6%	5.2%	1.5%	-0.3%	-1.4%
Other Industry	7	15	15	15	19	23	25	8.1%	0.3%	0.0%	2.2%	1.7%	0.9%
Non-Energy Use	3	4	7	7	8	10	10	2.3%	7.3%	-0.5%	2.0%	1.4%	0.8%
Residential	15	18	23	22	23	24	23	1.8%	2.7%	-0.3%	0.4%	0.3%	-0.4%
Services	1	2	6	12	14	17	18	13.4%	9.7%	7.1%	2.2%	1.4%	0.7%
Agriculture	2	3	5	4	5	6	6	4.1%	5.5%	-1.1%	1.4%	1.2%	0.9%
Road	8	11	13	23	27	29	30	2.3%	2.4%	5.6%	1.5%	0.9%	0.3%
Rail	0	0	0	0	0	0	0	0.4%	-3.6%	1.8%	1.2%	1.0%	0.6%
Aviation	0	1	0	1	1	1	1	9.5%	-5.7%	2.7%	3.9%	2.8%	1.7%
Other Transport	0	0	1	1	1	1	1	-2.6%	11.9%	2.9%	2.4%	1.2%	0.1%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Turkey	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>9</b>	<b>21</b>	<b>32</b>	<b>39</b>	<b>62</b>	<b>68</b>	<b>74</b>	<b>8.7%</b>	<b>4.3%</b>	<b>2.2%</b>	<b>4.6%</b>	<b>1.0%</b>	<b>0.8%</b>
Coal	6	11	14	27	46	45	47	6.4%	2.6%	6.9%	5.6%	-0.1%	0.3%
Oil	1	3	1	1	1	2	2	8.9%	-14.3%	3.0%	2.8%	5.5%	2.4%
Gas	2	7	17	11	13	18	19	13.3%	8.7%	-4.3%	1.7%	3.3%	0.8%
Biomass & Waste	0	0	0	0	1	2	5	n.s.	7.3%	14.2%	6.5%	10.9%	7.6%
Other	0	0	0	0	1	1	1	-0.5%	24.3%	23.4%	5.5%	0.9%	-0.3%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>58</b>	<b>125</b>	<b>211</b>	<b>305</b>	<b>449</b>	<b>579</b>	<b>679</b>	<b>8.1%</b>	<b>5.4%</b>	<b>3.7%</b>	<b>3.9%</b>	<b>2.6%</b>	<b>1.6%</b>
Coal	20	38	55	113	202	206	216	6.6%	3.7%	7.5%	6.0%	0.2%	0.5%
of which CCS	0	0	0	0	0	10	64	n.s.	n.s.	n.s.	n.s.	n.s.	20.3%
Oil	4	9	2	3	4	7	10	9.0%	-13.5%	4.1%	2.9%	5.6%	2.5%
Gas	10	46	98	65	78	108	113	16.3%	7.8%	-4.1%	1.9%	3.3%	0.4%
of which CCS	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	n.s.	n.s.	19.5%
Biomass & Waste	0	0	0	2	4	11	24	n.s.	7.6%	14.6%	7.3%	11.8%	8.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	2	8	18	n.s.	n.s.	n.s.	19.6%	15.4%	7.8%
Hydro	23	31	52	66	81	92	99	2.9%	5.3%	2.4%	2.1%	1.3%	0.7%
Wind	0	0	3	46	54	96	113	n.s.	56.4%	31.8%	1.7%	5.9%	1.6%
Solar	0	0	0	5	14	39	75	n.s.	n.s.	n.s.	11.7%	10.9%	6.8%
Other	0	0	1	5	9	11	12	-0.5%	24.3%	23.4%	5.6%	1.4%	1.4%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>17</b>	<b>27</b>	<b>49</b>	<b>107</b>	<b>144</b>	<b>199</b>	<b>231</b>	<b>5.0%</b>	<b>6.1%</b>	<b>8.1%</b>	<b>3.0%</b>	<b>3.2%</b>	<b>1.5%</b>
Coal	6	7	12	19	35	41	42	2.9%	5.1%	4.8%	6.1%	1.6%	0.2%
of which CCS	0	0	0	0	0	1	9	n.s.	n.s.	n.s.	n.s.	n.s.	20.5%
Oil	2	2	2	2	3	4	4	-2.7%	-0.4%	2.7%	3.2%	3.5%	0.7%
Gas	2	7	18	32	37	44	40	12.3%	10.0%	5.9%	1.3%	1.7%	-0.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	19.6%
Biomass & Waste	0	0	0	0	1	2	3	n.s.	11.5%	9.7%	6.8%	11.6%	8.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	19.3%	15.2%	7.6%
Hydro	7	11	16	29	35	40	43	5.1%	3.5%	6.4%	1.8%	1.2%	0.7%
Wind	0	0	1	20	24	40	46	n.s.	53.0%	31.4%	1.6%	5.4%	1.3%
Solar	0	0	0	3	9	26	49	n.s.	n.s.	n.s.	11.9%	10.8%	6.7%
Other	0	0	0	1	1	1	2	0.0%	20.2%	21.9%	5.6%	2.4%	1.7%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>41</b>	<b>59</b>	<b>80</b>	<b>100</b>	<b>117</b>	<b>127</b>	<b>130</b>	<b>3.7%</b>	<b>3.1%</b>	<b>2.3%</b>	<b>1.5%</b>	<b>0.9%</b>	<b>0.2%</b>
Coal	9	12	17	14	17	14	10	3.5%	3.3%	-1.6%	1.7%	-1.4%	-3.2%
Oil	20	26	28	36	37	36	32	2.5%	0.8%	2.4%	0.3%	-0.4%	-1.2%
Gas	1	5	13	19	19	19	17	21.0%	10.3%	3.6%	0.1%	0.1%	-0.9%
Electricity	4	8	15	21	31	41	48	7.9%	5.9%	3.9%	4.0%	2.7%	1.7%
Heat	0	1	3	3	5	6	7	12.4%	9.2%	0.0%	4.1%	2.7%	1.6%
Biomass & Other	7	6	4	7	8	12	15	-1.1%	-3.7%	5.3%	0.9%	3.6%	2.8%
Share of Renewables <sup>3</sup> (%)	24%	16%	13%	19%	23%	32%	41%	-3.7%	-2.4%	4.1%	1.7%	3.5%	2.6%
<b>Industry (incl. non-energy use)</b>	<b>15</b>	<b>24</b>	<b>32</b>	<b>38</b>	<b>45</b>	<b>50</b>	<b>51</b>	<b>5.3%</b>	<b>2.7%</b>	<b>1.7%</b>	<b>1.9%</b>	<b>0.9%</b>	<b>0.1%</b>
Coal	5	10	9	9	12	11	9	6.5%	-0.8%	-0.2%	2.9%	-0.7%	-2.3%
Oil	6	8	8	8	8	7	6	2.9%	-0.2%	-0.7%	0.7%	-0.9%	-1.9%
Gas	1	2	7	8	8	8	7	10.1%	14.0%	2.2%	-0.4%	0.3%	-0.9%
Electricity	2	4	7	10	14	18	21	5.4%	5.3%	4.3%	3.4%	2.3%	1.5%
Heat	0	0	1	2	2	2	2	50.7%	10.9%	2.6%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	0	0	1	2	3	5	n.s.	n.s.	n.s.	4.3%	7.7%	4.6%
<b>Buildings</b>	<b>15</b>	<b>20</b>	<b>29</b>	<b>34</b>	<b>38</b>	<b>40</b>	<b>41</b>	<b>2.6%</b>	<b>3.7%</b>	<b>1.6%</b>	<b>1.1%</b>	<b>0.8%</b>	<b>0.1%</b>
Coal	3	2	7	5	5	3	1	-4.5%	13.9%	-3.8%	-0.8%	-3.6%	-7.4%
Oil	3	4	1	1	1	1	1	1.4%	-8.7%	-1.9%	1.3%	0.2%	-0.8%
Gas	0	3	6	10	10	9	7	50.4%	7.5%	4.7%	-0.6%	-1.1%	-2.2%
Electricity	1	4	7	10	14	18	20	10.7%	6.5%	3.4%	3.1%	2.3%	1.4%
Heat	0	1	2	1	3	4	5	7.4%	8.0%	-2.6%	8.1%	4.1%	2.2%
Biomass & Other	7	6	4	6	5	5	5	-1.1%	-3.7%	2.8%	-1.2%	0.5%	0.1%
<b>Agriculture</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>4.1%</b>	<b>5.5%</b>	<b>-1.1%</b>	<b>1.4%</b>	<b>1.2%</b>	<b>0.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	25.8%	0.0%	-1.2%	-3.0%
Oil	2	3	4	4	4	5	4	3.4%	5.3%	-1.3%	1.4%	0.4%	-1.1%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	11.6%	1.2%	0.4%	-0.7%
Electricity	0	0	0	0	1	1	1	18.2%	6.2%	0.1%	1.7%	3.4%	4.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	13.1%
<b>Transport</b>	<b>9</b>	<b>12</b>	<b>14</b>	<b>24</b>	<b>29</b>	<b>32</b>	<b>33</b>	<b>2.4%</b>	<b>2.1%</b>	<b>5.4%</b>	<b>1.6%</b>	<b>1.0%</b>	<b>0.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	9	12	14	23	23	22	20	2.4%	2.1%	5.0%	0.0%	-0.5%	-1.0%
Gas	0	0	0	0	1	2	3	n.s.	36.7%	16.7%	17.6%	5.5%	2.8%
Electricity	0	0	0	0	3	5	6	8.3%	-6.5%	24.5%	24.0%	5.8%	2.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	1	2	3	n.s.	n.s.	53.9%	9.8%	6.1%	3.5%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>3</b>	<b>5</b>	<b>5</b>	<b>9</b>	<b>11</b>	<b>13</b>	<b>14</b>	<b>4.0%</b>	<b>0.5%</b>	<b>6.6%</b>	<b>1.7%</b>	<b>1.3%</b>	<b>1.0%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Mediterranean Middle East	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	27	36	46	54	65	73	80	2.9%	2.5%	1.6%	1.9%	1.2%	1.0%
GDP per capita (ppp, k\$'05)	5	7	8	10	12	15	20	2.7%	1.5%	1.8%	2.0%	2.5%	2.4%
GDP per capita (mer, k\$'05)	3	5	5	6	7	9	12	4.0%	-0.1%	1.8%	2.0%	2.5%	2.4%
Share Value Added - Agriculture (%)	6	3	1	2	2	2	2	-4.6%	-13.2%	10.4%	-0.9%	-0.9%	-0.7%
Share Value Added - Industry (%)	6	8	10	12	12	11	11	2.7%	2.5%	2.1%	-0.2%	-0.3%	-0.4%
Share Value Added - Services (%)	89	89	89	86	86	87	87	0.0%	0.1%	-0.4%	0.1%	0.1%	0.1%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	21	23	-7.8%	10.3%	-2.2%	1.6%	1.4%	0.9%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	28	24	47	43	47	64	85	-1.2%	6.8%	-0.9%	0.9%	3.1%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	111	172	200	198	224	263	287	4.5%	1.5%	-0.1%	1.2%	1.6%	0.9%
Total GHG (excl. sinks)	111	173	202	199	225	264	289	4.5%	1.6%	-0.1%	1.3%	1.6%	0.9%
Total GHG (energy, industry, agriculture)	111	173	202	199	225	264	289	4.5%	1.6%	-0.1%	1.3%	1.6%	0.9%
CO <sub>2</sub>	91	147	172	177	204	239	260	4.9%	1.6%	0.3%	1.5%	1.6%	0.8%
CH <sub>4</sub>	12	17	19	14	15	18	21	4.0%	0.8%	-2.7%	0.2%	2.3%	1.2%
N <sub>2</sub> O	7	7	8	4	3	4	4	0.6%	1.2%	-7.8%	-0.9%	1.1%	0.7%
F gases	1	1	3	4	3	4	5	3.4%	6.6%	4.4%	-3.1%	1.9%	3.5%
Total GHG from Energy and Industry	103	163	190	196	223	261	286	4.8%	1.5%	0.3%	1.3%	1.6%	0.9%
CO <sub>2</sub> Emissions from Fuel Comb.	83	133	162	164	188	219	236	4.9%	2.0%	0.2%	1.4%	1.5%	0.8%
Power generation/District heating	29	59	88	91	109	129	136	7.4%	4.1%	0.4%	1.7%	1.7%	0.5%
Industry	9	14	15	13	16	20	25	4.7%	1.0%	-1.6%	2.0%	2.1%	2.2%
Buildings	14	17	19	14	13	14	14	2.5%	0.7%	-2.9%	-0.3%	0.3%	0.3%
Agriculture	1	1	2	1	1	1	1	4.0%	2.5%	-3.7%	0.7%	-0.2%	-0.3%
Transport	21	31	31	39	42	46	49	4.0%	0.0%	2.5%	0.5%	0.9%	0.8%
Other	9	10	7	5	7	9	11	1.2%	-4.2%	-2.7%	3.4%	2.4%	2.0%
CO <sub>2</sub> captured (CCS)	0	0	0	0	1	15	43	n.s.	n.s.	n.s.	n.s.	30.3%	11.0%
Coal	0	0	0	0	1	14	41	n.s.	n.s.	n.s.	n.s.	31.0%	11.2%
Gas	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	25.0%	7.8%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	2.5%	1.8%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	25	37	40	27	36	44	55	3.9%	0.8%	-3.9%	3.1%	2.0%	2.2%
Coal	0	0	0	0	0	0	0	5.0%	-0.5%	n.s.	n.s.	n.s.	n.s.
Oil	23	31	28	15	17	16	15	3.1%	-0.7%	-6.0%	1.3%	-0.5%	-0.7%
Natural gas	1	5	9	9	12	16	20	12.9%	7.2%	-0.9%	3.7%	2.6%	2.2%
Biomass	0	0	0	0	1	1	1	3.0%	1.3%	11.0%	2.9%	0.4%	0.3%
Nuclear <sup>1</sup>	0	0	0	0	1	2	5	n.s.	n.s.	n.s.	22.1%	12.0%	7.7%
Hydro	0	0	0	0	0	0	0	1.5%	-0.6%	0.1%	0.9%	0.5%	0.4%
Other renewables	0	1	1	2	5	9	14	4.8%	6.8%	4.0%	10.0%	5.8%	5.0%
Net Imports	2	7	19	34	38	51	63						
Coal	2	7	8	13	17	24	32						
Oil	0	0	6	16	10	11	11						
Natural gas	0	0	5	4	11	16	18						
Biomass	0	0	0	0	0	1	1						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	27	44	58	60	75	96	119	4.9%	2.9%	0.4%	2.1%	2.5%	2.2%
Coal	2	7	8	13	17	24	32	11.2%	1.4%	5.8%	2.2%	3.7%	3.1%
Oil	23	31	34	31	28	27	27	3.1%	1.1%	-0.9%	-1.3%	-0.3%	-0.1%
Natural gas	1	5	15	13	24	32	38	13.2%	11.0%	-1.1%	6.1%	3.1%	1.6%
Biomass	0	0	0	1	1	1	2	2.9%	1.3%	13.2%	5.7%	4.3%	3.3%
Nuclear <sup>1</sup>	0	0	0	0	1	2	5	n.s.	n.s.	n.s.	22.1%	12.0%	7.7%
Hydro	0	0	0	0	0	0	0	1.5%	-0.6%	0.1%	0.9%	0.5%	0.4%
Other renewables	0	1	1	2	5	9	14	4.8%	6.8%	4.0%	10.0%	5.8%	5.0%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	27	44	58	60	75	96	119	4.9%	2.9%	0.4%	2.1%	2.5%	2.2%
Energy for Power Generation	9	19	31	30	41	56	73	7.0%	5.1%	-0.2%	3.0%	3.2%	2.7%
Other Energy Transformation & Losses	3	3	2	3	5	7	9	-1.1%	-4.7%	8.0%	3.6%	3.1%	2.5%
Final consumption	18	29	37	38	47	59	73	5.0%	2.3%	0.5%	2.1%	2.3%	2.2%
Steel, Non-Met. Minerals and Chem.	0	1	2	1	2	2	2	17.8%	2.1%	-2.4%	1.8%	1.8%	2.2%
Other Industry	3	4	5	5	7	9	12	2.1%	2.7%	-0.2%	2.7%	3.0%	3.0%
Non-Energy Use	1	4	3	3	3	4	5	11.9%	-2.3%	-1.8%	1.8%	2.0%	1.8%
Residential	3	6	8	7	9	10	13	6.3%	3.3%	-0.9%	1.6%	1.9%	1.9%
Services	3	4	6	6	7	10	12	2.4%	2.9%	-0.1%	2.6%	2.6%	2.5%
Agriculture	0	1	1	1	1	1	1	4.6%	2.7%	-0.9%	2.0%	1.9%	1.8%
Road	6	9	12	16	19	23	28	3.7%	3.1%	2.7%	1.9%	2.2%	1.8%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Aviation	0	0	0	0	0	0	0	32.1%	-12.3%	0.2%	3.8%	3.8%	3.0%
Other Transport	0	0	0	0	0	0	0	n.s.	5.8%	-6.2%	2.4%	2.0%	1.7%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Mediterranean Middle East	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>9</b>	<b>18</b>	<b>29</b>	<b>28</b>	<b>35</b>	<b>45</b>	<b>54</b>	<b>7.3%</b>	<b>5.2%</b>	<b>-0.4%</b>	<b>2.1%</b>	<b>2.5%</b>	<b>1.9%</b>
Coal	2	6	7	13	15	22	29	10.6%	1.7%	5.5%	2.0%	3.5%	2.8%
Oil	6	9	9	6	4	4	4	4.5%	0.2%	-3.8%	-4.5%	-0.5%	0.8%
Gas	1	2	13	9	15	19	21	13.8%	18.1%	-3.2%	5.2%	2.2%	0.8%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	9.0%	3.9%	3.8%	3.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>38</b>	<b>85</b>	<b>136</b>	<b>145</b>	<b>208</b>	<b>299</b>	<b>411</b>	<b>8.5%</b>	<b>4.8%</b>	<b>0.7%</b>	<b>3.7%</b>	<b>3.7%</b>	<b>3.2%</b>
Coal	10	29	34	60	76	106	141	10.9%	1.6%	5.7%	2.4%	3.4%	2.8%
of which CCS	0	0	0	0	1	17	53	n.s.	n.s.	n.s.	n.s.	33.2%	11.8%
Oil	21	42	39	27	17	16	18	7.1%	-0.8%	-3.5%	-4.6%	-0.4%	1.1%
Gas	3	10	59	48	80	100	112	13.6%	19.3%	-2.0%	5.2%	2.2%	1.1%
of which CCS	0	0	0	0	0	2	5	n.s.	n.s.	n.s.	n.s.	26.9%	8.0%
Biomass & Waste	0	0	0	0	0	0	1	n.s.	n.s.	9.0%	5.3%	5.1%	4.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	3	10	21	n.s.	n.s.	n.s.	22.3%	12.1%	7.7%
Hydro	3	4	4	4	4	4	4	1.5%	-0.6%	0.1%	0.9%	0.5%	0.4%
Wind	0	0	0	1	10	30	60	11.6%	17.0%	54.2%	24.3%	12.1%	7.0%
Solar	0	0	0	5	18	32	54	n.s.	n.s.	34.6%	13.9%	5.7%	5.5%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	30.6%	18.3%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>11</b>	<b>20</b>	<b>27</b>	<b>39</b>	<b>54</b>	<b>73</b>	<b>106</b>	<b>6.4%</b>	<b>2.9%</b>	<b>3.7%</b>	<b>3.2%</b>	<b>3.1%</b>	<b>3.8%</b>
Coal	2	4	5	9	13	17	21	7.8%	1.2%	6.1%	4.3%	2.3%	2.4%
of which CCS	0	0	0	0	0	2	7	n.s.	n.s.	n.s.	n.s.	33.3%	12.2%
Oil	7	9	6	6	4	3	3	2.9%	-4.3%	0.3%	-4.1%	-2.5%	0.7%
Gas	1	5	15	19	19	18	19	19.5%	11.5%	2.8%	-0.2%	-0.4%	0.7%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	27.3%	8.5%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	5.0%	5.4%	4.9%	4.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	2	3	n.s.	n.s.	n.s.	22.1%	11.8%	7.5%
Hydro	1	2	2	2	2	2	2	4.6%	-2.0%	-0.4%	0.9%	0.5%	0.4%
Wind	0	0	0	0	4	12	24	n.s.	18.1%	51.2%	24.1%	12.0%	7.0%
Solar	0	0	0	3	11	20	33	n.s.	n.s.	33.8%	13.9%	5.5%	5.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	29.9%	17.8%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>18</b>	<b>29</b>	<b>37</b>	<b>38</b>	<b>47</b>	<b>59</b>	<b>73</b>	<b>5.0%</b>	<b>2.3%</b>	<b>0.5%</b>	<b>2.1%</b>	<b>2.3%</b>	<b>2.2%</b>
Coal	0	0	0	1	1	1	2	30.2%	-0.1%	13.9%	4.4%	4.5%	5.1%
Oil	14	20	24	24	22	22	21	3.5%	1.9%	0.0%	-0.6%	-0.2%	-0.2%
Gas	1	3	2	2	6	10	13	12.8%	-3.6%	1.6%	10.4%	5.3%	3.2%
Electricity	3	6	9	10	15	22	30	8.4%	4.8%	0.8%	3.8%	3.7%	3.3%
Heat	0	1	1	1	3	3	4	4.8%	6.6%	0.9%	6.2%	2.9%	2.5%
Biomass & Other	0	0	0	0	1	1	2	2.9%	-0.1%	11.6%	6.6%	6.7%	5.5%
Share of Renewables <sup>3</sup> (%)	4%	4%	5%	7%	14%	21%	28%	-0.8%	1.5%	3.6%	7.7%	4.1%	2.9%
<b>Industry (incl. non-energy use)</b>	<b>5</b>	<b>9</b>	<b>10</b>	<b>9</b>	<b>11</b>	<b>14</b>	<b>19</b>	<b>6.9%</b>	<b>0.7%</b>	<b>-1.1%</b>	<b>2.3%</b>	<b>2.6%</b>	<b>2.6%</b>
Coal	0	0	0	1	1	1	2	30.2%	-0.1%	13.9%	4.4%	4.5%	5.1%
Oil	4	5	5	4	4	4	5	2.6%	1.2%	-2.2%	0.1%	0.2%	0.0%
Gas	0	2	2	1	2	3	5	55.4%	-3.6%	-3.0%	6.3%	4.4%	3.1%
Electricity	1	2	3	3	4	5	7	7.3%	3.7%	0.3%	3.0%	3.4%	3.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	7.5%	5.7%	4.8%
<b>Buildings</b>	<b>7</b>	<b>10</b>	<b>14</b>	<b>13</b>	<b>16</b>	<b>20</b>	<b>25</b>	<b>4.4%</b>	<b>3.1%</b>	<b>-0.6%</b>	<b>2.1%</b>	<b>2.2%</b>	<b>2.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	4	5	6	4	3	2	2	3.5%	0.9%	-3.9%	-3.0%	-2.7%	-1.9%
Gas	1	0	0	1	2	3	4	-9.1%	-4.0%	14.0%	10.3%	4.6%	2.1%
Electricity	2	4	7	7	9	11	15	9.1%	5.4%	0.6%	2.2%	2.8%	2.8%
Heat	0	1	1	1	3	3	4	4.8%	6.6%	0.9%	6.2%	2.9%	2.5%
Biomass & Other	0	0	0	0	0	0	0	2.9%	-0.1%	4.7%	-2.6%	0.7%	2.8%
<b>Agriculture</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4.6%</b>	<b>2.7%</b>	<b>-0.9%</b>	<b>2.0%</b>	<b>1.9%</b>	<b>1.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	1	0	0	0	0	4.0%	2.5%	-3.7%	0.7%	-0.2%	-0.3%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	1	1	1	5.8%	3.0%	3.0%	2.6%	2.7%	2.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	10.9%	4.8%
<b>Transport</b>	<b>6</b>	<b>9</b>	<b>12</b>	<b>16</b>	<b>19</b>	<b>24</b>	<b>28</b>	<b>3.9%</b>	<b>2.8%</b>	<b>2.7%</b>	<b>1.9%</b>	<b>2.2%</b>	<b>1.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	6	9	12	15	15	15	15	3.9%	2.8%	2.3%	-0.3%	0.1%	-0.1%
Gas	0	0	0	0	2	3	5	n.s.	n.s.	n.s.	22.5%	7.2%	4.2%
Electricity	0	0	0	0	2	4	7	n.s.	n.s.	n.s.	28.5%	7.5%	4.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	2	n.s.	n.s.	n.s.	12.1%	7.9%	6.0%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>7</b>	<b>9</b>	<b>-1.1%</b>	<b>-4.7%</b>	<b>8.0%</b>	<b>3.6%</b>	<b>3.1%</b>	<b>2.5%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Rest Gulf	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	34	48	69	90	111	133	155	3.3%	3.8%	2.7%	2.1%	1.8%	1.5%
GDP per capita (ppp, k\$'05)	6	11	12	11	13	14	15	7.2%	0.5%	-0.7%	1.7%	0.9%	0.4%
GDP per capita (mer, k\$'05)	5	7	8	10	12	13	13	4.2%	1.3%	2.3%	1.7%	0.9%	0.4%
Share Value Added - Agriculture (%)	9	6	1	1	1	1	1	-5.1%	-15.7%	-4.9%	-0.7%	-0.3%	-0.1%
Share Value Added - Industry (%)	42	49	50	44	44	43	43	1.5%	0.1%	-1.1%	-0.2%	-0.1%	-0.1%
Share Value Added - Services (%)	48	45	49	55	56	56	57	-0.7%	0.9%	1.1%	0.2%	0.1%	0.0%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	21	23	-7.8%	10.3%	-2.2%	1.6%	1.4%	0.9%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	28	24	47	43	47	64	85	-1.2%	6.8%	-0.9%	0.9%	3.1%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	290	428	714	1 014	1 279	1 389	1 347	4.0%	5.3%	3.6%	2.4%	0.8%	-0.3%
Total GHG (excl. sinks)	290	429	715	1 015	1 281	1 390	1 349	4.0%	5.2%	3.6%	2.4%	0.8%	-0.3%
Total GHG (energy, industry, agriculture)	290	429	715	1 015	1 281	1 390	1 349	4.0%	5.2%	3.6%	2.4%	0.8%	-0.3%
CO <sub>2</sub>	220	333	569	817	1 060	1 216	1 185	4.3%	5.5%	3.7%	2.6%	1.4%	-0.3%
CH <sub>4</sub>	57	85	131	185	205	161	152	4.2%	4.4%	3.6%	1.0%	-2.4%	-0.6%
N <sub>2</sub> O	10	9	12	8	9	10	10	-1.3%	2.8%	-3.4%	1.1%	0.6%	-0.1%
F gases	4	2	4	5	6	4	3	-5.5%	6.0%	1.9%	2.7%	-3.8%	-4.1%
Total GHG from Energy and Industry	279	416	699	1 008	1 273	1 382	1 341	4.1%	5.3%	3.7%	2.4%	0.8%	-0.3%
CO <sub>2</sub> Emissions from Fuel Comb.	180	292	508	731	945	1 087	1 057	4.9%	5.7%	3.7%	2.6%	1.4%	-0.3%
Power generation/District heating	60	105	204	242	316	370	350	5.7%	6.9%	1.7%	2.7%	1.6%	-0.5%
Industry	48	73	130	249	340	393	391	4.2%	5.9%	6.7%	3.2%	1.5%	0.0%
Buildings	9	14	17	24	31	38	37	4.5%	2.3%	3.2%	2.6%	2.1%	-0.4%
Agriculture	1	1	3	3	4	4	4	9.9%	9.4%	-0.8%	1.4%	0.8%	-0.3%
Transport	42	55	83	113	118	124	123	2.8%	4.2%	3.1%	0.5%	0.5%	-0.1%
Other	21	44	71	100	136	158	153	7.8%	4.9%	3.6%	3.1%	1.5%	-0.3%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	2	52	n.s.	n.s.	n.s.	n.s.	44.2%	39.5%
Coal	0	0	0	0	0	0	4	n.s.	n.s.	n.s.	n.s.	16.9%	43.2%
Gas	0	0	0	0	0	2	48	n.s.	n.s.	n.s.	n.s.	n.s.	39.6%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	8.8%	0.8%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	367	559	728	1 105	1 366	1 557	1 496	4.3%	2.7%	4.3%	2.1%	1.3%	-0.4%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	331	482	531	779	863	1 055	1 044	3.8%	1.0%	3.9%	1.0%	2.0%	-0.1%
Natural gas	36	76	196	324	502	499	446	7.8%	9.9%	5.2%	4.5%	0.0%	-1.1%
Biomass	0	0	0	1	1	1	1	2.0%	6.1%	17.0%	6.5%	1.5%	-2.1%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	6.2%	4.6%	5.3%
Hydro	0	0	0	0	1	1	1	-13.5%	22.8%	2.0%	0.6%	0.7%	1.0%
Other renewables	0	0	0	0	0	1	5	n.s.	n.s.	8.0%	8.0%	11.7%	13.4%
Net Imports	- 297	- 447	- 523	- 784	- 950	- 1 079	- 1 007						
Coal	0	0	1	3	5	7	10						
Oil	- 295	- 431	- 444	- 683	- 763	- 942	- 927						
Natural gas	- 2	- 16	- 80	- 104	- 193	- 145	- 91						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	1	1	1	1	1						
Primary Energy Demand <sup>2</sup>	69	111	205	321	417	479	489	4.8%	6.3%	4.6%	2.7%	1.4%	0.2%
Coal	0	0	1	3	5	7	10	n.s.	n.s.	14.2%	5.4%	4.8%	2.9%
Oil	36	51	87	96	100	113	116	3.7%	5.5%	0.9%	0.5%	1.2%	0.3%
Natural gas	33	60	116	220	309	354	355	6.0%	6.9%	6.6%	3.4%	1.4%	0.0%
Biomass	0	0	0	1	1	1	1	2.1%	6.1%	17.7%	6.3%	2.3%	0.1%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	6.2%	4.6%	5.3%
Hydro	0	0	0	0	1	1	1	-13.5%	22.8%	2.0%	0.6%	0.7%	1.0%
Other renewables	0	0	0	0	0	1	5	n.s.	n.s.	8.0%	8.0%	11.7%	13.4%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	69	111	205	321	417	479	489	4.8%	6.3%	4.6%	2.7%	1.4%	0.2%
Energy for Power Generation	23	40	79	98	130	154	165	5.7%	7.0%	2.2%	2.9%	1.7%	0.7%
Other Energy Transformation & Losses	8	14	28	56	73	83	84	5.9%	7.3%	7.1%	2.7%	1.3%	0.2%
Final consumption	44	67	118	197	257	297	305	4.3%	5.8%	5.2%	2.7%	1.5%	0.2%
Steel, Non-Met. Minerals and Chem.	2	3	6	16	23	24	21	5.6%	5.0%	10.7%	4.0%	0.2%	-1.2%
Other Industry	17	26	45	81	109	127	130	4.6%	5.6%	6.1%	3.0%	1.6%	0.2%
Non-Energy Use	5	6	13	24	33	40	41	3.5%	7.2%	6.3%	3.3%	1.8%	0.3%
Residential	6	9	14	20	26	32	34	4.3%	4.2%	3.9%	2.6%	2.1%	0.7%
Services	1	3	8	12	17	21	24	11.0%	10.6%	3.7%	3.9%	2.4%	1.0%
Agriculture	0	0	1	1	1	1	1	7.1%	9.5%	-0.6%	1.4%	1.1%	0.8%
Road	14	19	32	44	48	52	53	3.3%	5.1%	3.2%	0.9%	0.9%	0.3%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	2.6%	0.1%	0.2%	0.1%
Other Transport	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest Gulf	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>23</b>	<b>40</b>	<b>78</b>	<b>97</b>	<b>129</b>	<b>152</b>	<b>159</b>	<b>5.8%</b>	<b>7.0%</b>	<b>2.2%</b>	<b>2.9%</b>	<b>1.6%</b>	<b>0.5%</b>
Coal	0	0	0	1	2	3	5	n.s.	n.s.	n.s.	10.5%	6.5%	4.6%
Oil	9	14	26	17	15	13	14	5.0%	6.2%	-4.3%	-0.9%	-1.2%	0.7%
Gas	14	26	52	80	112	135	140	6.3%	7.4%	4.3%	3.4%	1.9%	0.3%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	4.4%	4.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>79</b>	<b>140</b>	<b>285</b>	<b>438</b>	<b>629</b>	<b>806</b>	<b>912</b>	<b>5.9%</b>	<b>7.4%</b>	<b>4.4%</b>	<b>3.7%</b>	<b>2.5%</b>	<b>1.2%</b>
Coal	0	0	0	3	8	16	25	n.s.	n.s.	n.s.	11.0%	6.9%	4.6%
of which CCS	0	0	0	0	0	0	5	n.s.	n.s.	n.s.	n.s.	n.s.	54.2%
Oil	31	53	62	70	65	58	63	5.5%	1.6%	1.2%	-0.8%	-1.0%	0.8%
Gas	45	86	217	357	544	714	785	6.7%	9.7%	5.1%	4.3%	2.7%	1.0%
of which CCS	0	0	0	0	0	2	117	n.s.	n.s.	n.s.	n.s.	n.s.	47.7%
Biomass & Waste	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	4.7%	4.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	6.3%	4.6%	5.4%
Hydro	3	1	5	6	6	7	7	-13.5%	22.8%	2.0%	0.6%	0.7%	1.0%
Wind	0	0	0	1	2	6	16	n.s.	n.s.	n.s.	12.0%	10.8%	10.9%
Solar	0	0	1	2	3	5	15	n.s.	n.s.	4.5%	5.6%	6.2%	10.8%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	19.2%	17.9%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>26</b>	<b>35</b>	<b>68</b>	<b>107</b>	<b>123</b>	<b>156</b>	<b>179</b>	<b>2.9%</b>	<b>7.0%</b>	<b>4.6%</b>	<b>1.4%</b>	<b>2.4%</b>	<b>1.4%</b>
Coal	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	11.0%	7.1%	4.7%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	54.3%
Oil	14	14	16	20	13	14	14	-0.1%	1.2%	2.6%	-4.4%	0.5%	0.5%
Gas	10	18	50	82	103	131	142	5.7%	10.5%	5.2%	2.2%	2.5%	0.8%
of which CCS	0	0	0	0	0	0	15	n.s.	n.s.	n.s.	n.s.	n.s.	48.1%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	4.7%	4.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	6.1%	4.4%	5.2%
Hydro	2	3	3	3	3	4	4	4.7%	-0.4%	2.2%	0.6%	0.7%	1.0%
Wind	0	0	0	0	1	2	6	n.s.	n.s.	n.s.	11.9%	10.6%	10.7%
Solar	0	0	1	1	2	3	9	n.s.	n.s.	5.4%	6.2%	6.4%	10.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	17.3%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>44</b>	<b>67</b>	<b>118</b>	<b>197</b>	<b>257</b>	<b>297</b>	<b>305</b>	<b>4.3%</b>	<b>5.8%</b>	<b>5.2%</b>	<b>2.7%</b>	<b>1.5%</b>	<b>0.2%</b>
Coal	0	0	1	2	3	4	5	n.s.	n.s.	11.2%	3.3%	3.5%	1.4%
Oil	24	33	55	78	87	101	102	3.2%	5.3%	3.5%	1.2%	1.4%	0.1%
Gas	15	25	43	87	123	137	133	5.2%	5.7%	7.4%	3.6%	1.1%	-0.3%
Electricity	6	10	19	30	42	54	60	6.2%	6.8%	4.4%	3.5%	2.4%	1.2%
Heat	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	46.6%	18.3%
Biomass & Other	0	0	0	1	1	2	3	2.1%	6.1%	17.1%	7.0%	6.0%	3.4%
Share of Renewables <sup>3</sup> (%)	1%	0%	1%	1%	1%	1%	2%	-11.9%	11.4%	1.7%	0.6%	4.3%	8.5%
<b>Industry (incl. non-energy use)</b>	<b>23</b>	<b>36</b>	<b>63</b>	<b>120</b>	<b>165</b>	<b>191</b>	<b>192</b>	<b>4.4%</b>	<b>5.9%</b>	<b>6.7%</b>	<b>3.2%</b>	<b>1.5%</b>	<b>0.1%</b>
Coal	0	0	1	2	3	4	5	n.s.	n.s.	11.2%	3.3%	3.5%	1.4%
Oil	7	9	16	27	36	49	52	2.4%	6.4%	5.0%	3.0%	3.0%	0.6%
Gas	15	24	42	85	115	124	119	5.1%	5.7%	7.1%	3.1%	0.7%	-0.4%
Electricity	1	3	4	7	10	14	16	6.3%	3.1%	6.6%	4.5%	3.0%	1.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-5.6%	-1.3%	-1.7%
<b>Buildings</b>	<b>7</b>	<b>12</b>	<b>22</b>	<b>32</b>	<b>43</b>	<b>53</b>	<b>57</b>	<b>5.5%</b>	<b>6.1%</b>	<b>3.8%</b>	<b>3.1%</b>	<b>2.2%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	4	5	6	5	4	4	4.3%	2.5%	1.2%	-2.1%	-1.3%	-2.0%
Gas	0	0	0	2	7	10	11	12.0%	-2.7%	28.5%	12.7%	4.7%	0.4%
Electricity	4	7	16	23	31	37	40	6.2%	7.9%	3.8%	2.8%	2.0%	0.8%
Heat	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	46.6%	18.3%
Biomass & Other	0	0	0	0	0	1	1	2.1%	6.1%	9.8%	3.0%	3.4%	0.0%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>7.1%</b>	<b>9.5%</b>	<b>-0.6%</b>	<b>1.4%</b>	<b>1.1%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	1	1	1	1	1	9.9%	9.4%	-0.8%	1.4%	0.8%	-0.3%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	-24.9%	22.5%	4.6%	2.4%	6.0%	9.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	20.6%
<b>Transport</b>	<b>14</b>	<b>19</b>	<b>32</b>	<b>44</b>	<b>48</b>	<b>52</b>	<b>54</b>	<b>3.3%</b>	<b>5.2%</b>	<b>3.2%</b>	<b>0.9%</b>	<b>0.9%</b>	<b>0.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	14	19	32	44	45	46	45	3.3%	5.2%	3.1%	0.3%	0.3%	-0.3%
Gas	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	24.6%	5.9%	3.4%
Electricity	0	0	0	0	1	2	4	n.s.	n.s.	n.s.	32.5%	6.7%	4.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	2	n.s.	n.s.	n.s.	25.7%	8.2%	4.7%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>8</b>	<b>14</b>	<b>28</b>	<b>56</b>	<b>73</b>	<b>83</b>	<b>84</b>	<b>5.9%</b>	<b>7.3%</b>	<b>7.1%</b>	<b>2.7%</b>	<b>1.3%</b>	<b>0.2%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

China	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	1 155	1 270	1 342	1 403	1 416	1 395	1 349	1.0%	0.5%	0.5%	0.1%	-0.1%	-0.3%
GDP per capita (ppp, k\$'05)	1	3	7	13	21	30	38	8.9%	9.6%	6.5%	4.9%	3.6%	2.3%
GDP per capita (mer, k\$'05)	1	1	3	6	9	13	16	8.6%	9.4%	6.4%	4.9%	3.6%	2.3%
Share Value Added - Agriculture (%)	22	13	10	8	8	7	7	-5.1%	-3.0%	-1.7%	-0.9%	-0.4%	-0.2%
Share Value Added - Industry (%)	34	42	45	43	37	32	27	2.1%	0.8%	-0.6%	-1.3%	-1.6%	-1.5%
Share Value Added - Services (%)	44	45	45	49	55	61	66	0.3%	0.0%	0.9%	1.2%	1.0%	0.7%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	21	23	-7.8%	10.3%	-2.2%	1.6%	1.4%	0.9%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	28	24	47	43	47	64	85	-1.2%	6.8%	-0.9%	0.9%	3.1%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	3 850	4 827	11 074	14 731	14 786	12 147	9 009	2.3%	8.7%	2.9%	0.0%	-1.9%	-2.9%
Total GHG (excl. sinks)	3 953	5 159	11 367	15 131	15 186	12 489	9 500	2.7%	8.2%	2.9%	0.0%	-1.9%	-2.7%
Total GHG (energy, industry, agriculture)	3 953	5 159	11 367	15 131	15 186	12 489	9 500	2.7%	8.2%	2.9%	0.0%	-1.9%	-2.7%
CO <sub>2</sub>	2 587	3 686	9 016	12 709	13 221	10 584	7 792	3.6%	9.4%	3.5%	0.4%	-2.2%	-3.0%
CH <sub>4</sub>	1 016	1 045	1 644	1 563	1 186	1 115	972	0.3%	4.6%	-0.5%	-2.7%	-0.6%	-1.4%
N <sub>2</sub> O	338	378	529	618	599	576	522	1.1%	3.4%	1.6%	-0.3%	-0.4%	-1.0%
F gases	13	51	177	242	180	214	214	14.8%	13.3%	3.2%	-2.9%	1.7%	0.0%
Total GHG from Energy and Industry	3 177	4 371	10 363	14 029	14 197	11 517	8 611	3.2%	9.0%	3.1%	0.1%	-2.1%	-2.9%
CO <sub>2</sub> Emissions from Fuel Comb.	2 348	3 251	7 869	10 979	11 261	8 607	5 973	3.3%	9.2%	3.4%	0.3%	-2.7%	-3.6%
Power generation/District heating	615	1 235	3 203	4 701	4 986	3 354	1 591	7.2%	10.0%	3.9%	0.6%	-3.9%	-7.2%
Industry	921	1 049	2 828	3 386	3 142	2 254	1 598	1.3%	10.4%	1.8%	-0.7%	-3.3%	-3.4%
Buildings	446	319	491	589	529	455	427	-3.3%	4.4%	1.8%	-1.1%	-1.5%	-0.6%
Agriculture	92	48	89	102	94	71	44	-6.3%	6.3%	1.4%	-0.8%	-2.8%	-4.7%
Transport	119	242	545	991	1 238	1 391	1 382	7.3%	8.4%	6.2%	2.3%	1.2%	-0.1%
Other	155	357	714	1 211	1 272	1 082	932	8.7%	7.2%	5.4%	0.5%	-1.6%	-1.5%
CO <sub>2</sub> captured (CCS)	0	0	0	0	40	925	2 208	n.s.	n.s.	n.s.	n.s.	36.7%	9.1%
Coal	0	0	0	0	38	874	1 982	n.s.	n.s.	n.s.	n.s.	36.7%	8.5%
Gas	0	0	0	0	2	50	155	n.s.	n.s.	n.s.	n.s.	37.9%	12.1%
Biomass	0	0	0	0	0	0	71	n.s.	n.s.	n.s.	3.2%	28.1%	n.s.
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	943	1 188	2 306	2 900	3 189	3 310	3 213	2.3%	6.9%	2.3%	1.0%	0.4%	-0.3%
Coal	581	777	1 713	1 976	1 785	1 450	1 109	2.9%	8.2%	1.4%	-1.0%	-2.1%	-2.6%
Oil	137	161	201	239	236	171	107	1.6%	2.3%	1.8%	-0.1%	-3.2%	-4.6%
Natural gas	13	23	82	161	309	465	564	5.8%	13.5%	7.0%	6.7%	4.2%	1.9%
Biomass	200	202	213	240	279	307	324	0.1%	0.5%	1.2%	1.5%	1.0%	0.5%
Nuclear <sup>1</sup>	0	4	19	88	246	433	516	n.s.	15.9%	16.4%	10.9%	5.8%	1.8%
Hydro	11	19	62	108	150	156	157	5.8%	12.5%	5.7%	3.3%	0.4%	0.0%
Other renewables	0	1	15	88	184	329	437	29.4%	29.8%	19.6%	7.7%	5.9%	2.9%
Net Imports	- 55	8	348	978	1 209	992	950						
Coal	- 31	- 48	115	405	467	213	133						
Oil	- 26	59	228	513	632	706	710						
Natural gas	1	- 3	7	63	111	70	99						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	1	4	10						
Electricity	0	- 1	- 1	- 2	- 2	- 2	- 2						
Primary Energy Demand <sup>2</sup>	888	1 195	2 654	3 878	4 399	4 303	4 163	3.0%	8.3%	3.9%	1.3%	-0.2%	-0.3%
Coal	550	729	1 828	2 381	2 252	1 663	1 243	2.9%	9.6%	2.7%	-0.6%	-3.0%	-2.9%
Oil	111	220	429	752	868	877	816	7.1%	6.9%	5.8%	1.4%	0.1%	-0.7%
Natural gas	14	20	89	224	420	535	663	3.4%	16.1%	9.6%	6.5%	2.5%	2.2%
Biomass	200	202	213	240	279	307	324	0.1%	0.5%	1.2%	1.5%	1.0%	0.5%
Nuclear <sup>1</sup>	0	4	19	88	246	433	516	n.s.	15.9%	16.4%	10.9%	5.8%	1.8%
Hydro	11	19	62	108	150	156	157	5.8%	12.5%	5.7%	3.3%	0.4%	0.0%
Other renewables	0	1	15	88	184	329	437	29.4%	29.8%	19.6%	7.7%	5.9%	2.9%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	888	1 195	2 654	3 878	4 399	4 303	4 163	3.0%	8.3%	3.9%	1.3%	-0.2%	-0.3%
Energy for Power Generation	168	339	919	1 518	1 952	2 145	2 260	7.3%	10.5%	5.1%	2.5%	0.9%	0.5%
Other Energy Transformation & Losses	59	120	288	465	502	446	426	7.3%	9.2%	4.9%	0.8%	-1.2%	-0.5%
Final consumption	715	854	1 817	2 578	2 878	2 818	2 718	1.8%	7.8%	3.6%	1.1%	-0.2%	-0.4%
Steel, Non-Met. Minerals and Chem.	161	247	675	896	904	713	594	4.4%	10.6%	2.9%	0.1%	-2.3%	-1.8%
Other Industry	119	117	311	469	582	608	607	-0.2%	10.3%	4.2%	2.2%	0.4%	0.0%
Non-Energy Use	44	61	137	190	194	177	153	3.4%	8.3%	3.4%	0.2%	-0.9%	-1.5%
Residential	300	282	357	436	440	418	389	-0.6%	2.4%	2.0%	0.1%	-0.5%	-0.7%
Services	25	39	95	163	224	288	342	4.4%	9.4%	5.6%	3.2%	2.5%	1.7%
Agriculture	30	18	34	40	43	45	45	-4.8%	6.2%	1.7%	0.8%	0.4%	0.1%
Road	21	63	169	312	392	450	464	11.9%	10.3%	6.3%	2.3%	1.4%	0.3%
Rail	12	10	12	14	17	20	21	-1.9%	2.5%	1.7%	1.9%	1.3%	0.6%
Aviation	1	4	11	25	38	50	56	22.1%	10.3%	8.4%	4.2%	2.8%	1.1%
Other Transport	2	12	17	32	44	49	46	16.9%	3.8%	6.5%	3.1%	1.1%	-0.6%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

China	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>157</b>	<b>314</b>	<b>823</b>	<b>1 235</b>	<b>1 371</b>	<b>1 227</b>	<b>1 151</b>	<b>7.2%</b>	<b>10.1%</b>	<b>4.1%</b>	<b>1.1%</b>	<b>-1.1%</b>	<b>-0.6%</b>
Coal	144	299	792	1 130	1 150	932	721	7.6%	10.2%	3.6%	0.2%	-2.1%	-2.5%
Oil	12	13	4	29	47	46	53	0.6%	-11.6%	22.5%	5.0%	-0.2%	1.4%
Gas	1	1	15	48	125	166	255	7.5%	28.1%	12.0%	10.2%	2.9%	4.3%
Biomass & Waste	0	1	12	28	48	82	122	n.s.	30.2%	9.3%	5.4%	5.5%	4.1%
Other	0	0	0	0	0	0	0	6.7%	1.4%	0.8%	-16.8%	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>621</b>	<b>1 356</b>	<b>4 234</b>	<b>7 947</b>	<b>10 948</b>	<b>12 643</b>	<b>13 883</b>	<b>8.1%</b>	<b>12.1%</b>	<b>6.5%</b>	<b>3.3%</b>	<b>1.4%</b>	<b>0.9%</b>
Coal	441	1 061	3 250	5 217	5 464	4 412	3 425	9.2%	11.8%	4.8%	0.5%	-2.1%	-2.5%
of which CCS	0	0	0	0	46	1 107	2 410	n.s.	n.s.	n.s.	n.s.	37.3%	8.1%
Oil	50	47	13	124	203	200	231	-0.6%	-12.0%	25.1%	5.0%	-0.1%	1.4%
Gas	3	6	69	233	655	930	1 419	7.6%	28.2%	12.9%	10.9%	3.6%	4.3%
of which CCS	0	0	0	0	2	134	434	n.s.	n.s.	n.s.	n.s.	49.4%	12.5%
Biomass & Waste	0	2	34	96	187	360	576	n.s.	30.2%	11.0%	6.9%	6.8%	4.8%
of which CCS	0	0	0	0	0	0	92	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	17	74	347	991	1 757	2 100	n.s.	16.0%	16.7%	11.1%	5.9%	1.8%
Hydro	127	222	722	1 254	1 741	1 817	1 821	5.8%	12.5%	5.7%	3.3%	0.4%	0.0%
Wind	0	1	70	537	1 314	2 307	3 015	n.s.	n.s.	22.5%	9.4%	5.8%	2.7%
Solar	0	0	1	138	390	849	1 260	26.7%	31.7%	n.s.	10.9%	8.1%	4.0%
Other	0	0	0	0	2	11	38	6.7%	2.2%	7.1%	21.7%	19.3%	12.8%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>149</b>	<b>336</b>	<b>1 012</b>	<b>1 885</b>	<b>2 863</b>	<b>3 768</b>	<b>3 688</b>	<b>8.5%</b>	<b>11.7%</b>	<b>6.4%</b>	<b>4.3%</b>	<b>2.8%</b>	<b>-0.2%</b>
Coal	92	225	701	1 055	1 258	1 231	488	9.3%	12.0%	4.2%	1.8%	-0.2%	-8.8%
of which CCS	0	0	0	0	6	156	341	n.s.	n.s.	n.s.	n.s.	38.2%	8.1%
Oil	18	20	15	24	32	35	37	1.1%	-2.9%	4.8%	3.0%	0.7%	0.7%
Gas	3	8	31	63	122	200	253	11.7%	14.3%	7.2%	6.8%	5.1%	2.4%
of which CCS	0	0	0	0	0	17	57	n.s.	n.s.	n.s.	n.s.	50.0%	12.6%
Biomass & Waste	0	0	7	14	26	51	79	n.s.	30.4%	7.7%	6.1%	7.0%	4.5%
of which CCS	0	0	0	0	0	0	12	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	2	10	49	138	240	281	n.s.	16.6%	17.2%	10.9%	5.7%	1.6%
Hydro	36	79	216	357	471	488	489	8.2%	10.5%	5.2%	2.8%	0.4%	0.0%
Wind	0	0	31	230	554	958	1 234	n.s.	57.2%	22.0%	9.2%	5.6%	2.6%
Solar	0	0	1	94	263	564	821	26.7%	31.7%	n.s.	10.9%	7.9%	3.8%
Other	0	0	0	0	0	1	5	0.0%	0.4%	3.6%	21.4%	18.8%	12.3%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>715</b>	<b>854</b>	<b>1 817</b>	<b>2 578</b>	<b>2 878</b>	<b>2 818</b>	<b>2 718</b>	<b>1.8%</b>	<b>7.8%</b>	<b>3.6%</b>	<b>1.1%</b>	<b>-0.2%</b>	<b>-0.4%</b>
Coal	365	340	804	883	750	474	323	-0.7%	9.0%	0.9%	-1.6%	-4.5%	-3.8%
Oil	84	180	383	665	754	765	704	7.9%	7.8%	5.7%	1.3%	0.1%	-0.8%
Gas	10	15	61	141	224	275	291	4.2%	15.2%	8.7%	4.7%	2.1%	0.5%
Electricity	41	89	297	565	783	908	1 010	8.0%	12.8%	6.7%	3.3%	1.5%	1.1%
Heat	13	28	72	114	141	176	195	7.7%	10.0%	4.7%	2.1%	2.3%	1.0%
Biomass & Other	200	202	200	209	227	219	195	0.1%	-0.1%	0.4%	0.8%	-0.3%	-1.2%
Share of Renewables <sup>3</sup> (%)	31%	27%	16%	17%	21%	27%	32%	-1.3%	-5.1%	0.2%	2.2%	2.7%	1.7%
<b>Industry (incl. non-energy use)</b>	<b>325</b>	<b>425</b>	<b>1 123</b>	<b>1 555</b>	<b>1 680</b>	<b>1 499</b>	<b>1 353</b>	<b>2.7%</b>	<b>10.2%</b>	<b>3.3%</b>	<b>0.8%</b>	<b>-1.1%</b>	<b>-1.0%</b>
Coal	238	269	708	799	698	452	316	1.2%	10.2%	1.2%	-1.3%	-4.3%	-3.5%
Oil	39	70	142	228	222	182	136	6.0%	7.4%	4.8%	-0.3%	-2.0%	-2.9%
Gas	8	9	28	78	139	174	175	1.2%	12.3%	10.9%	6.0%	2.2%	0.0%
Electricity	30	59	203	387	526	570	604	7.2%	13.1%	6.7%	3.1%	0.8%	0.6%
Heat	11	19	42	59	71	82	88	5.9%	8.2%	3.4%	2.0%	1.4%	0.7%
Biomass & Other	0	0	0	4	23	38	35	n.s.	n.s.	n.s.	20.0%	5.1%	-0.8%
<b>Buildings</b>	<b>325</b>	<b>321</b>	<b>452</b>	<b>599</b>	<b>664</b>	<b>706</b>	<b>731</b>	<b>-0.1%</b>	<b>3.5%</b>	<b>2.9%</b>	<b>1.0%</b>	<b>0.6%</b>	<b>0.4%</b>
Coal	105	61	81	70	41	15	3	-5.3%	2.9%	-1.5%	-5.1%	-9.4%	-14.0%
Oil	7	19	33	60	62	61	60	10.9%	5.5%	6.1%	0.3%	-0.2%	-0.1%
Gas	2	6	26	51	72	86	96	11.4%	15.9%	6.8%	3.5%	1.8%	1.0%
Electricity	8	24	82	161	229	298	356	12.2%	13.1%	7.0%	3.6%	2.7%	1.8%
Heat	3	9	31	56	69	94	107	13.4%	13.2%	6.2%	2.2%	3.0%	1.3%
Biomass & Other	200	202	199	202	191	151	110	0.1%	-0.2%	0.2%	-0.6%	-2.3%	-3.2%
<b>Agriculture</b>	<b>30</b>	<b>18</b>	<b>34</b>	<b>40</b>	<b>43</b>	<b>45</b>	<b>45</b>	<b>-4.8%</b>	<b>6.2%</b>	<b>1.7%</b>	<b>0.8%</b>	<b>0.4%</b>	<b>0.1%</b>
Coal	11	6	11	11	8	5	2	-6.8%	7.0%	-0.3%	-2.6%	-5.0%	-7.1%
Oil	15	8	14	19	19	16	11	-5.8%	5.6%	2.8%	0.3%	-1.8%	-3.9%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	5.3%	1.1%	-0.5%	-2.1%
Electricity	4	5	8	10	12	15	17	2.2%	6.2%	1.7%	2.1%	2.0%	1.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	3	9	15	n.s.	n.s.	n.s.	25.7%	11.3%	5.4%
<b>Transport</b>	<b>35</b>	<b>89</b>	<b>209</b>	<b>384</b>	<b>491</b>	<b>568</b>	<b>587</b>	<b>9.7%</b>	<b>8.9%</b>	<b>6.3%</b>	<b>2.5%</b>	<b>1.5%</b>	<b>0.3%</b>
Coal	11	5	3	3	2	2	1	-7.8%	-3.5%	-2.5%	-2.0%	-2.0%	-2.0%
Oil	24	83	194	358	451	506	498	13.2%	8.9%	6.3%	2.3%	1.2%	-0.2%
Gas	0	0	7	13	13	15	20	n.s.	48.8%	5.8%	0.0%	1.7%	3.2%
Electricity	1	1	3	7	16	25	33	9.6%	10.3%	8.0%	8.0%	4.6%	2.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	2	3	10	21	35	n.s.	n.s.	7.0%	11.9%	7.8%	5.3%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>59</b>	<b>120</b>	<b>288</b>	<b>465</b>	<b>502</b>	<b>446</b>	<b>426</b>	<b>7.3%</b>	<b>9.2%</b>	<b>4.9%</b>	<b>0.8%</b>	<b>-1.2%</b>	<b>-0.5%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

India	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	871	1 053	1 231	1 389	1 528	1 634	1 705	1.9%	1.6%	1.2%	1.0%	0.7%	0.4%
GDP per capita (ppp, k\$'05)	1	2	3	5	9	14	20	3.6%	5.9%	5.5%	5.7%	4.4%	3.5%
GDP per capita (mer, k\$'05)	0	1	1	2	3	5	7	3.6%	5.9%	5.8%	5.7%	4.4%	3.5%
Share Value Added - Agriculture (%)	29	23	18	15	13	12	12	-2.3%	-2.4%	-2.0%	-1.2%	-0.6%	-0.3%
Share Value Added - Industry (%)	26	26	28	26	23	20	16	-0.2%	0.6%	-0.7%	-1.0%	-1.7%	-2.1%
Share Value Added - Services (%)	44	51	54	60	64	68	72	1.4%	0.7%	0.9%	0.7%	0.7%	0.6%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	21	23	-7.8%	10.3%	-2.2%	1.6%	1.4%	0.9%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	28	24	47	43	47	64	85	-1.2%	6.8%	-0.9%	0.9%	3.1%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	1 243	1 641	2 387	3 639	5 165	6 172	6 207	2.8%	3.8%	4.3%	3.6%	1.8%	0.1%
Total GHG (excl. sinks)	1 272	1 690	2 515	3 738	5 240	6 253	6 318	2.9%	4.1%	4.0%	3.4%	1.8%	0.1%
Total GHG (energy, industry, agriculture)	1 272	1 690	2 515	3 738	5 236	6 253	6 318	2.9%	4.1%	4.0%	3.4%	1.8%	0.1%
CO <sub>2</sub>	589	936	1 662	2 730	4 060	5 130	5 228	4.7%	5.9%	5.1%	4.0%	2.4%	0.2%
CH <sub>4</sub>	507	555	615	712	813	782	747	0.9%	1.0%	1.5%	1.3%	-0.4%	-0.5%
N <sub>2</sub> O	166	188	220	263	305	321	320	1.3%	1.5%	1.8%	1.5%	0.5%	0.0%
F gases	10	10	18	33	58	20	23	0.6%	5.8%	6.2%	5.9%	-10.0%	1.1%
Total GHG from Energy and Industry	791	1 172	1 974	3 137	4 577	5 585	5 668	4.0%	5.3%	4.7%	3.9%	2.0%	0.1%
CO <sub>2</sub> Emissions from Fuel Comb.	545	873	1 494	2 420	3 534	4 470	4 561	4.8%	5.5%	4.9%	3.9%	2.4%	0.2%
Power generation/District heating	233	462	792	1 219	1 861	2 474	2 590	7.1%	5.5%	4.4%	4.3%	2.9%	0.5%
Industry	126	151	296	560	788	907	849	1.8%	7.0%	6.6%	3.5%	1.4%	-0.7%
Buildings	75	97	157	221	304	350	318	2.5%	5.0%	3.5%	3.3%	1.4%	-0.9%
Agriculture	14	26	27	38	47	53	53	6.6%	0.5%	3.5%	2.1%	1.2%	0.1%
Transport	74	96	164	285	383	475	524	2.6%	5.5%	5.7%	3.0%	2.2%	1.0%
Other	23	42	58	98	151	211	226	6.2%	3.3%	5.3%	4.5%	3.4%	0.7%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	3	97	n.s.	n.s.	n.s.	12.6%	53.5%	43.1%
Coal	0	0	0	0	0	1	76	n.s.	n.s.	n.s.	12.6%	53.1%	51.7%
Gas	0	0	0	0	0	1	21	n.s.	n.s.	n.s.	12.7%	n.s.	30.4%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	12.5%	12.4%	13.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	278	356	502	644	732	805	880	2.5%	3.5%	2.5%	1.3%	0.9%	0.9%
Coal	92	142	223	326	398	420	400	4.5%	4.6%	3.9%	2.0%	0.6%	-0.5%
Oil	35	36	44	36	34	29	22	0.2%	2.0%	-1.9%	-0.7%	-1.3%	-2.9%
Natural gas	10	22	42	48	40	35	30	8.1%	6.8%	1.3%	-1.9%	-1.3%	-1.3%
Biomass	133	145	173	188	186	190	198	0.8%	1.8%	0.9%	-0.1%	0.2%	0.4%
Nuclear <sup>1</sup>	2	4	7	10	15	30	60	10.7%	4.4%	3.3%	4.6%	7.2%	7.3%
Hydro	6	6	11	15	18	18	19	0.4%	5.2%	3.7%	1.5%	0.5%	0.5%
Other renewables	0	0	3	22	43	83	150	32.6%	31.4%	22.7%	7.1%	6.8%	6.2%
Net Imports	32	83	191	432	778	1 086	1 174						
Coal	8	6	60	140	238	319	298						
Oil	23	76	118	225	289	336	347						
Natural gas	1	1	12	66	250	433	529						
Biomass	0	0	0	0	0	-5	-6						
Biofuels	0	0	0	0	1	3	5						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	311	440	693	1 076	1 511	1 891	2 054	3.5%	4.7%	4.5%	3.4%	2.3%	0.8%
Coal	100	148	283	466	636	739	698	4.0%	6.7%	5.1%	3.2%	1.5%	-0.6%
Oil	59	112	162	261	323	365	369	6.7%	3.7%	4.9%	2.1%	1.2%	0.1%
Natural gas	11	23	54	114	289	467	559	7.9%	9.0%	7.7%	9.8%	4.9%	1.8%
Biomass	133	145	173	188	186	185	192	0.8%	1.8%	0.9%	-0.1%	-0.1%	0.4%
Nuclear <sup>1</sup>	2	4	7	10	15	30	60	10.7%	4.4%	3.3%	4.6%	7.2%	7.3%
Hydro	6	6	11	15	18	18	19	0.4%	5.2%	3.7%	1.5%	0.5%	0.5%
Other renewables	0	0	3	22	43	83	150	32.6%	31.4%	22.7%	7.1%	6.8%	6.2%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	311	440	693	1 076	1 511	1 891	2 054	3.5%	4.7%	4.5%	3.4%	2.3%	0.8%
Energy for Power Generation	69	134	240	392	622	876	1 070	6.9%	6.0%	5.0%	4.7%	3.5%	2.0%
Other Energy Transformation & Losses	8	17	33	52	86	122	150	7.4%	6.8%	4.6%	5.2%	3.5%	2.1%
Final consumption	252	321	483	752	1 008	1 208	1 264	2.5%	4.2%	4.5%	3.0%	1.8%	0.5%
Steel, Non-Met. Minerals and Chem.	24	38	72	168	235	250	206	4.5%	6.6%	8.9%	3.4%	0.6%	-1.9%
Other Industry	47	49	86	133	194	241	246	0.3%	5.8%	4.5%	3.9%	2.2%	0.2%
Non-Energy Use	14	30	37	58	75	87	86	7.7%	2.3%	4.6%	2.6%	1.5%	-0.1%
Residential	123	141	172	202	218	236	241	1.4%	2.0%	1.6%	0.8%	0.8%	0.2%
Services	14	16	33	49	89	140	186	1.6%	7.1%	4.1%	6.2%	4.6%	2.9%
Agriculture	9	15	19	30	37	44	50	6.0%	2.3%	4.4%	2.3%	1.7%	1.3%
Road	16	28	58	103	144	185	214	6.2%	7.4%	5.9%	3.4%	2.6%	1.5%
Rail	4	2	4	5	8	12	16	-6.1%	5.0%	4.2%	4.2%	3.7%	3.0%
Aviation	1	1	2	3	6	11	15	3.0%	8.5%	7.2%	7.0%	5.3%	3.6%
Other Transport	1	1	1	1	2	3	4	-0.5%	4.4%	2.5%	6.1%	4.1%	2.8%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

India	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>61</b>	<b>122</b>	<b>220</b>	<b>346</b>	<b>547</b>	<b>745</b>	<b>840</b>	<b>7.2%</b>	<b>6.0%</b>	<b>4.6%</b>	<b>4.7%</b>	<b>3.1%</b>	<b>1.2%</b>
Coal	52	104	177	274	391	489	497	7.0%	5.5%	4.4%	3.6%	2.3%	0.2%
Oil	5	9	7	11	17	23	27	6.0%	-1.9%	4.0%	4.7%	3.0%	1.6%
Gas	3	9	27	41	108	195	257	10.3%	11.1%	4.4%	10.2%	6.1%	2.8%
Biomass & Waste	0	1	8	20	31	38	58	n.s.	27.3%	9.6%	4.3%	2.0%	4.4%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>293</b>	<b>570</b>	<b>988</b>	<b>1 825</b>	<b>3 011</b>	<b>4 380</b>	<b>5 590</b>	<b>6.9%</b>	<b>5.7%</b>	<b>6.3%</b>	<b>5.1%</b>	<b>3.8%</b>	<b>2.5%</b>
Coal	192	390	658	1 072	1 618	2 114	2 188	7.4%	5.4%	5.0%	4.2%	2.7%	0.3%
of which CCS	0	0	0	0	0	1	93	n.s.	n.s.	n.s.	n.s.	n.s.	52.8%
Oil	13	29	24	47	73	99	119	8.2%	-1.8%	6.7%	4.6%	3.1%	1.8%
Gas	10	56	113	185	491	906	1 237	18.8%	7.3%	5.0%	10.2%	6.3%	3.2%
of which CCS	0	0	0	0	0	2	39	n.s.	n.s.	n.s.	n.s.	n.s.	34.9%
Biomass & Waste	0	1	15	64	102	144	264	n.s.	27.6%	15.9%	4.7%	3.5%	6.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	6	17	26	37	59	121	248	10.7%	4.5%	3.4%	4.8%	7.5%	7.5%
Hydro	72	74	123	176	205	214	224	0.4%	5.2%	3.7%	1.5%	0.5%	0.5%
Wind	0	2	29	141	199	408	749	48.6%	32.8%	17.3%	3.5%	7.5%	6.3%
Solar	0	0	0	104	264	370	548	8.8%	31.7%	n.s.	9.8%	3.4%	4.0%
Other	0	0	0	0	1	4	13	n.s.	n.s.	n.s.	33.1%	18.7%	12.6%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>78</b>	<b>123</b>	<b>215</b>	<b>479</b>	<b>751</b>	<b>1 082</b>	<b>1 482</b>	<b>4.6%</b>	<b>5.8%</b>	<b>8.4%</b>	<b>4.6%</b>	<b>3.7%</b>	<b>3.2%</b>
Coal	52	79	131	223	306	394	437	4.3%	5.2%	5.5%	3.2%	2.5%	1.0%
of which CCS	0	0	0	0	0	0	12	n.s.	n.s.	n.s.	n.s.	n.s.	52.9%
Oil	3	5	5	10	12	15	18	5.9%	-1.2%	7.6%	2.0%	2.4%	2.0%
Gas	3	10	21	45	87	157	227	11.4%	7.5%	7.9%	6.8%	6.1%	3.8%
of which CCS	0	0	0	0	0	0	5	n.s.	n.s.	n.s.	n.s.	n.s.	35.5%
Biomass & Waste	0	1	3	14	15	20	37	n.s.	14.6%	15.0%	0.9%	2.9%	6.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	1	3	4	5	8	17	34	8.2%	4.9%	2.4%	4.6%	7.3%	7.2%
Hydro	19	24	37	53	62	65	68	2.3%	4.7%	3.5%	1.6%	0.5%	0.4%
Wind	0	1	13	61	85	170	305	44.9%	27.1%	16.3%	3.4%	7.2%	6.0%
Solar	0	0	0	69	175	244	355	8.8%	22.2%	n.s.	9.8%	3.4%	3.8%
Other	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	32.3%	18.2%	12.1%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>252</b>	<b>321</b>	<b>483</b>	<b>752</b>	<b>1 008</b>	<b>1 208</b>	<b>1 264</b>	<b>2.5%</b>	<b>4.2%</b>	<b>4.5%</b>	<b>3.0%</b>	<b>1.8%</b>	<b>0.5%</b>
Coal	44	41	99	177	224	224	178	-0.8%	9.4%	6.0%	2.4%	0.0%	-2.3%
Oil	50	94	134	225	274	308	308	6.6%	3.6%	5.3%	2.0%	1.2%	0.0%
Gas	6	10	22	63	156	229	245	5.1%	8.6%	11.0%	9.5%	3.9%	0.7%
Electricity	18	32	62	119	198	287	367	5.8%	6.8%	6.7%	5.2%	3.8%	2.5%
Heat	0	0	0	0	3	16	39	16.5%	23.5%	5.2%	19.5%	18.4%	9.5%
Biomass & Other	133	144	165	168	153	144	127	0.8%	1.3%	0.2%	-0.9%	-0.6%	-1.3%
Share of Renewables <sup>3</sup> (%)	57%	49%	38%	28%	22%	21%	25%	-1.5%	-2.5%	-2.9%	-2.4%	-0.3%	1.7%
<b>Industry (incl. non-energy use)</b>	<b>86</b>	<b>116</b>	<b>194</b>	<b>359</b>	<b>504</b>	<b>578</b>	<b>538</b>	<b>3.1%</b>	<b>5.3%</b>	<b>6.3%</b>	<b>3.5%</b>	<b>1.4%</b>	<b>-0.7%</b>
Coal	32	32	84	161	204	203	163	0.0%	10.1%	6.8%	2.4%	0.0%	-2.2%
Oil	17	36	37	65	73	74	63	8.1%	0.2%	5.8%	1.3%	0.0%	-1.5%
Gas	6	9	17	49	113	165	174	4.8%	6.6%	10.8%	8.8%	3.8%	0.6%
Electricity	9	14	28	49	73	94	102	4.1%	7.3%	6.0%	4.0%	2.5%	0.9%
Heat	0	0	0	0	0	0	0	n.s.	23.5%	3.9%	-0.2%	-0.3%	-0.2%
Biomass & Other	23	26	29	35	40	42	35	1.3%	1.3%	1.9%	1.3%	0.5%	-1.9%
<b>Buildings</b>	<b>137</b>	<b>158</b>	<b>205</b>	<b>251</b>	<b>307</b>	<b>376</b>	<b>427</b>	<b>1.4%</b>	<b>2.6%</b>	<b>2.0%</b>	<b>2.0%</b>	<b>2.0%</b>	<b>1.3%</b>
Coal	10	9	16	17	20	21	15	-1.4%	5.9%	0.6%	1.7%	0.6%	-3.1%
Oil	11	19	27	39	43	42	37	5.7%	3.6%	3.7%	0.8%	-0.1%	-1.3%
Gas	0	0	3	13	39	57	60	21.0%	27.7%	14.9%	11.9%	3.8%	0.5%
Electricity	5	11	23	49	94	150	209	8.5%	7.8%	7.9%	6.8%	4.8%	3.4%
Heat	0	0	0	0	3	16	39	16.5%	23.5%	5.3%	20.1%	18.5%	9.6%
Biomass & Other	111	119	136	132	108	90	67	0.7%	1.3%	-0.2%	-2.0%	-1.9%	-2.9%
<b>Agriculture</b>	<b>9</b>	<b>15</b>	<b>19</b>	<b>30</b>	<b>37</b>	<b>44</b>	<b>50</b>	<b>6.0%</b>	<b>2.3%</b>	<b>4.4%</b>	<b>2.3%</b>	<b>1.7%</b>	<b>1.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	4	8	8	12	15	17	17	6.6%	0.4%	3.6%	2.1%	1.2%	0.1%
Gas	0	0	0	0	0	0	0	5.4%	2.7%	1.6%	1.9%	1.1%	0.2%
Electricity	4	7	11	18	23	27	32	5.3%	4.1%	5.1%	2.4%	1.8%	1.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	n.s.	18.7%
<b>Transport</b>	<b>21</b>	<b>32</b>	<b>64</b>	<b>113</b>	<b>160</b>	<b>210</b>	<b>249</b>	<b>4.4%</b>	<b>7.2%</b>	<b>5.8%</b>	<b>3.6%</b>	<b>2.8%</b>	<b>1.7%</b>
Coal	2	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	18	31	62	108	144	176	191	5.5%	7.1%	5.8%	2.9%	2.0%	0.8%
Gas	0	0	1	1	4	7	11	n.s.	33.6%	-0.6%	11.1%	6.5%	4.5%
Electricity	0	1	1	3	8	15	24	7.2%	5.0%	8.8%	11.1%	7.2%	4.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	5	12	24	n.s.	-0.7%	19.8%	28.4%	9.7%	6.7%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>8</b>	<b>17</b>	<b>33</b>	<b>52</b>	<b>86</b>	<b>122</b>	<b>150</b>	<b>7.4%</b>	<b>6.8%</b>	<b>4.6%</b>	<b>5.2%</b>	<b>3.5%</b>	<b>2.1%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Indonesia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	181	212	242	272	295	312	322	1.5%	1.3%	1.2%	0.8%	0.6%	0.3%
GDP per capita (ppp, k\$'05)	2	3	4	6	9	13	18	2.6%	3.8%	4.4%	4.4%	3.5%	3.2%
GDP per capita (mer, k\$'05)	1	1	2	2	4	5	7	2.6%	3.8%	4.3%	4.4%	3.5%	3.2%
Share Value Added - Agriculture (%)	19	16	15	13	11	11	10	-2.2%	-0.2%	-1.9%	-1.2%	-0.6%	-0.4%
Share Value Added - Industry (%)	39	46	47	47	46	44	40	1.6%	0.2%	0.1%	-0.2%	-0.5%	-0.8%
Share Value Added - Services (%)	41	38	38	40	42	46	49	-0.7%	-0.2%	0.6%	0.6%	0.7%	0.8%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	21	23	-7.8%	10.3%	-2.2%	1.6%	1.4%	0.9%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	28	24	47	43	47	64	85	-1.2%	6.8%	-0.9%	0.9%	3.1%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	1 008	1 338	1 927	1 933	1 731	1 827	1 752	2.9%	3.7%	0.0%	-1.1%	0.5%	-0.4%
Total GHG (excl. sinks)	1 344	1 585	1 927	1 933	1 731	1 827	1 752	1.7%	2.0%	0.0%	-1.1%	0.5%	-0.4%
Total GHG (energy, industry, agriculture)	388	524	709	913	1 120	1 288	1 295	3.1%	3.1%	2.6%	2.1%	1.4%	0.1%
CO <sub>2</sub>	169	304	422	567	744	926	963	6.0%	3.3%	3.0%	2.8%	2.2%	0.4%
CH <sub>4</sub>	141	158	214	254	267	247	221	1.1%	3.1%	1.7%	0.5%	-0.8%	-1.1%
N <sub>2</sub> O	76	62	73	90	104	109	104	-2.0%	1.5%	2.1%	1.5%	0.4%	-0.4%
F gases	2	0	1	2	4	7	7	-12.9%	6.3%	9.2%	8.7%	4.2%	1.1%
Total GHG from Energy and Industry	259	398	556	737	923	1 091	1 118	4.4%	3.4%	2.9%	2.3%	1.7%	0.2%
CO <sub>2</sub> Emissions from Fuel Comb.	149	278	390	522	680	848	877	6.5%	3.5%	2.9%	2.7%	2.2%	0.3%
Power generation/District heating	22	61	122	165	191	241	244	10.7%	7.1%	3.1%	1.4%	2.4%	0.1%
Industry	39	72	102	130	201	252	252	6.3%	3.6%	2.4%	4.5%	2.3%	0.0%
Buildings	21	37	24	32	42	55	54	6.0%	-4.3%	2.8%	2.9%	2.7%	-0.1%
Agriculture	3	8	9	9	11	13	14	9.3%	2.0%	0.0%	2.2%	1.4%	0.4%
Transport	32	64	92	143	163	190	209	7.0%	3.8%	4.5%	1.3%	1.6%	0.9%
Other	31	36	41	43	71	96	105	1.5%	1.2%	0.5%	5.2%	3.0%	0.9%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	1	17	n.s.	n.s.	n.s.	n.s.	n.s.	37.8%
Coal	0	0	0	0	0	0	9	n.s.	n.s.	n.s.	n.s.	n.s.	38.1%
Gas	0	0	0	0	0	0	8	n.s.	n.s.	n.s.	n.s.	n.s.	38.7%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	10.5%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	162	232	378	487	346	267	226	3.7%	5.0%	2.6%	-3.4%	-2.5%	-1.7%
Coal	6	49	195	283	93	15	0	22.5%	14.9%	3.8%	-10.6%	-16.4%	n.s.
Oil	76	72	49	42	46	40	25	-0.6%	-3.7%	-1.6%	1.0%	-1.4%	-4.5%
Natural gas	36	57	71	80	106	97	67	4.6%	2.1%	1.2%	2.9%	-0.9%	-3.6%
Biomass	42	49	52	62	69	77	81	1.6%	0.6%	1.8%	1.0%	1.1%	0.5%
Nuclear <sup>1</sup>	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	n.s.	n.s.	11.6%
Hydro	0	1	2	1	1	2	3	5.8%	5.7%	-1.3%	1.2%	3.1%	3.0%
Other renewables	1	4	8	18	30	34	47	15.8%	6.9%	8.2%	5.1%	1.5%	3.1%
Net Imports	- 65	- 82	- 177	- 223	- 3	150	229						
Coal	- 2	- 37	- 165	- 252	- 61	25	40						
Oil	- 42	- 14	21	47	52	71	89						
Natural gas	- 22	- 31	- 32	- 17	13	68	115						
Biomass	0	0	0	- 1	- 7	- 14	- 15						
Biofuels	0	0	0	- 1	- 1	- 1	- 1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	97	151	201	263	343	417	455	4.5%	2.9%	2.7%	2.7%	2.0%	0.9%
Coal	4	12	30	31	32	40	40	10.4%	9.8%	0.2%	0.3%	2.3%	0.0%
Oil	34	58	70	89	99	111	115	5.3%	1.9%	2.4%	1.1%	1.2%	0.3%
Natural gas	15	27	39	63	119	166	182	6.1%	3.9%	5.0%	6.6%	3.3%	1.0%
Biomass	42	49	52	62	62	63	66	1.6%	0.6%	1.7%	0.1%	0.1%	0.4%
Nuclear <sup>1</sup>	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	n.s.	n.s.	11.6%
Hydro	0	1	2	1	1	2	3	5.8%	5.7%	-1.3%	1.2%	3.1%	3.0%
Other renewables	1	4	8	18	30	34	47	15.8%	6.9%	8.2%	5.1%	1.5%	3.1%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	97	151	201	263	343	417	455	4.5%	2.9%	2.7%	2.7%	2.0%	0.9%
Energy for Power Generation	8	24	46	72	97	122	146	11.7%	6.7%	4.5%	3.0%	2.3%	1.9%
Other Energy Transformation & Losses	12	13	19	10	22	35	43	0.5%	4.0%	-6.3%	8.6%	4.5%	2.1%
Final consumption	79	121	149	203	254	302	324	4.3%	2.1%	3.2%	2.3%	1.7%	0.7%
Steel, Non-Met. Minerals and Chem.	3	5	9	17	31	38	36	6.3%	5.9%	6.6%	6.0%	2.0%	-0.7%
Other Industry	15	25	32	36	50	64	68	5.2%	2.3%	1.3%	3.2%	2.5%	0.7%
Non-Energy Use	7	10	8	14	18	21	21	2.9%	-1.4%	5.2%	2.5%	1.5%	0.2%
Residential	42	53	56	70	75	79	80	2.4%	0.6%	2.2%	0.8%	0.6%	0.1%
Services	1	4	5	8	12	20	28	13.2%	3.2%	4.6%	4.9%	4.7%	3.5%
Agriculture	1	2	3	3	4	4	5	9.3%	2.0%	0.0%	2.2%	1.7%	1.4%
Road	9	19	31	48	54	64	72	7.4%	4.9%	4.5%	1.2%	1.6%	1.1%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Aviation	0	1	2	4	5	6	8	7.4%	14.1%	4.8%	3.3%	2.7%	2.0%
Other Transport	1	2	2	3	4	5	6	7.9%	2.0%	4.6%	3.6%	2.1%	1.4%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%



Indonesia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>7</b>	<b>19</b>	<b>37</b>	<b>53</b>	<b>66</b>	<b>84</b>	<b>94</b>	<b>11.3%</b>	<b>6.7%</b>	<b>3.7%</b>	<b>2.2%</b>	<b>2.5%</b>	<b>1.1%</b>
Coal	2	8	19	26	25	31	30	13.7%	8.4%	3.5%	-0.5%	2.2%	-0.3%
Oil	4	5	8	3	3	3	3	1.5%	6.3%	-9.5%	-1.7%	-0.3%	0.2%
Gas	0	6	9	22	35	47	56	39.3%	4.1%	9.6%	5.1%	2.9%	1.7%
Biomass & Waste	0	0	0	0	0	1	2	n.s.	31.5%	14.4%	7.6%	10.2%	10.4%
Other	0	0	1	2	3	3	3	15.8%	6.8%	6.8%	5.2%	1.1%	1.6%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>33</b>	<b>93</b>	<b>170</b>	<b>274</b>	<b>376</b>	<b>502</b>	<b>631</b>	<b>11.1%</b>	<b>6.2%</b>	<b>4.9%</b>	<b>3.2%</b>	<b>2.9%</b>	<b>2.3%</b>
Coal	10	34	68	111	114	143	143	13.3%	7.2%	4.9%	0.3%	2.4%	0.0%
of which CCS	0	0	0	0	0	0	13	n.s.	n.s.	n.s.	n.s.	n.s.	40.9%
Oil	15	18	34	13	11	11	11	1.8%	6.4%	-9.3%	-1.6%	-0.2%	0.3%
Gas	1	26	40	92	169	240	300	42.9%	4.4%	8.7%	6.2%	3.6%	2.3%
of which CCS	0	0	0	0	0	1	18	n.s.	n.s.	n.s.	n.s.	n.s.	40.1%
Biomass & Waste	0	0	0	1	1	4	11	n.s.	31.5%	18.9%	10.0%	11.4%	11.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	4	11	n.s.	n.s.	n.s.	n.s.	n.s.	11.6%
Hydro	6	10	17	15	17	23	31	5.8%	5.7%	-1.3%	1.2%	3.1%	3.0%
Wind	0	0	0	22	28	32	50	n.s.	n.s.	n.s.	2.5%	1.1%	4.7%
Solar	0	0	0	2	5	12	32	n.s.	n.s.	n.s.	10.7%	8.0%	10.9%
Other	1	5	9	18	30	34	41	15.8%	6.8%	6.8%	5.3%	1.2%	1.8%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>13</b>	<b>25</b>	<b>34</b>	<b>70</b>	<b>92</b>	<b>113</b>	<b>152</b>	<b>6.9%</b>	<b>3.0%</b>	<b>7.5%</b>	<b>2.7%</b>	<b>2.1%</b>	<b>3.0%</b>
Coal	2	8	13	29	33	34	30	16.1%	5.4%	8.5%	1.3%	0.1%	-1.2%
of which CCS	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	n.s.	41.3%
Oil	7	5	6	6	5	2	2	-4.6%	2.2%	1.2%	-2.3%	-8.9%	0.4%
Gas	1	8	10	16	27	38	49	32.6%	2.1%	4.8%	5.0%	3.5%	2.6%
of which CCS	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	n.s.	40.4%
Biomass & Waste	0	0	0	0	0	1	2	n.s.	31.2%	1.5%	9.9%	11.5%	11.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	n.s.	11.4%
Hydro	3	4	4	5	7	13	21	2.9%	-1.2%	3.0%	2.9%	6.7%	4.9%
Wind	0	0	0	9	12	13	20	n.s.	n.s.	n.s.	2.4%	1.2%	4.5%
Solar	0	0	0	1	4	8	21	n.s.	n.s.	n.s.	10.8%	7.8%	10.7%
Other	0	0	1	3	4	5	5	9.9%	12.7%	7.8%	5.4%	0.9%	1.3%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>79</b>	<b>121</b>	<b>149</b>	<b>203</b>	<b>254</b>	<b>302</b>	<b>324</b>	<b>4.3%</b>	<b>2.1%</b>	<b>3.2%</b>	<b>2.3%</b>	<b>1.7%</b>	<b>0.7%</b>
Coal	2	5	8	6	9	11	12	8.1%	5.9%	-2.5%	3.1%	2.3%	0.8%
Oil	27	48	60	86	96	108	111	6.0%	2.3%	3.5%	1.2%	1.2%	0.3%
Gas	6	12	16	31	61	85	89	6.7%	3.2%	6.8%	7.0%	3.4%	0.4%
Electricity	2	7	13	21	28	38	47	10.8%	6.5%	4.9%	3.2%	2.9%	2.3%
Heat	0	0	0	0	1	2	6	n.s.	n.s.	n.s.	7.7%	8.0%	11.9%
Biomass & Other	42	49	51	60	60	59	59	1.6%	0.4%	1.5%	0.0%	-0.1%	-0.1%
Share of Renewables <sup>3</sup> (%)	59%	45%	38%	34%	28%	25%	26%	-2.6%	-1.7%	-1.1%	-1.8%	-1.3%	0.7%
<b>Industry (incl. non-energy use)</b>	<b>25</b>	<b>40</b>	<b>50</b>	<b>68</b>	<b>99</b>	<b>123</b>	<b>125</b>	<b>4.7%</b>	<b>2.1%</b>	<b>3.2%</b>	<b>3.9%</b>	<b>2.2%</b>	<b>0.2%</b>
Coal	2	5	8	6	9	11	12	8.0%	5.9%	-2.5%	3.1%	2.3%	0.8%
Oil	9	13	15	20	25	28	25	3.8%	1.6%	3.1%	2.2%	0.9%	-0.8%
Gas	6	11	16	28	51	68	70	6.7%	3.2%	6.0%	6.1%	3.0%	0.3%
Electricity	1	3	4	7	10	12	13	8.9%	4.2%	4.8%	3.0%	2.0%	1.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	7	9	6	6	5	5	6	1.8%	-3.0%	-0.3%	-1.2%	-0.3%	0.6%
<b>Buildings</b>	<b>43</b>	<b>56</b>	<b>61</b>	<b>77</b>	<b>87</b>	<b>99</b>	<b>108</b>	<b>2.8%</b>	<b>0.8%</b>	<b>2.4%</b>	<b>1.2%</b>	<b>1.3%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	7	12	7	8	6	5	4	5.9%	-4.4%	0.8%	-2.3%	-1.6%	-2.1%
Gas	0	0	0	3	9	16	17	8.1%	14.4%	32.5%	13.9%	5.7%	0.7%
Electricity	1	4	8	13	18	25	32	12.6%	7.9%	4.9%	3.0%	3.1%	2.7%
Heat	0	0	0	0	1	2	6	n.s.	n.s.	n.s.	7.7%	8.0%	11.9%
Biomass & Other	35	41	45	53	53	51	48	1.6%	1.0%	1.6%	0.0%	-0.3%	-0.6%
<b>Agriculture</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>9.3%</b>	<b>2.0%</b>	<b>0.0%</b>	<b>2.2%</b>	<b>1.7%</b>	<b>1.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	2	3	3	4	4	4	9.3%	2.0%	0.0%	2.2%	1.4%	0.4%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	18.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	19.0%
<b>Transport</b>	<b>11</b>	<b>21</b>	<b>35</b>	<b>55</b>	<b>64</b>	<b>76</b>	<b>86</b>	<b>7.4%</b>	<b>5.1%</b>	<b>4.5%</b>	<b>1.5%</b>	<b>1.7%</b>	<b>1.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	11	21	35	54	61	71	77	7.4%	5.0%	4.4%	1.2%	1.5%	0.8%
Gas	0	0	0	0	1	1	2	n.s.	-6.6%	30.2%	18.0%	5.5%	5.0%
Electricity	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	56.1%	10.3%	5.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	2	3	5	n.s.	n.s.	15.3%	7.7%	5.6%	6.1%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>12</b>	<b>13</b>	<b>19</b>	<b>10</b>	<b>22</b>	<b>35</b>	<b>43</b>	<b>0.5%</b>	<b>4.0%</b>	<b>-6.3%</b>	<b>8.6%</b>	<b>4.5%</b>	<b>2.1%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Malaysia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	18	23	28	32	36	39	41	2.5%	1.8%	1.4%	1.1%	0.7%	0.5%
GDP per capita (ppp, k\$'05)	7	11	14	20	27	36	46	4.4%	2.7%	3.6%	3.3%	2.8%	2.5%
GDP per capita (mer, k\$'05)	3	5	6	9	12	17	21	4.4%	2.7%	3.6%	3.3%	2.8%	2.5%
Share Value Added - Agriculture (%)	14	9	10	10	9	9	9	-3.8%	1.1%	-0.5%	-0.3%	-0.2%	-0.1%
Share Value Added - Industry (%)	36	39	37	33	29	24	20	0.8%	-0.6%	-1.1%	-1.4%	-1.7%	-2.0%
Share Value Added - Services (%)	50	51	53	57	62	66	71	0.2%	0.2%	0.8%	0.8%	0.7%	0.6%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	21	23	-7.8%	10.3%	-2.2%	1.6%	1.4%	0.9%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	28	24	47	43	47	64	85	-1.2%	6.8%	-0.9%	0.9%	3.1%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	- 153	- 51	408	487	532	499	450	n.s.	n.s.	1.8%	0.9%	-0.6%	-1.0%
Total GHG (excl. sinks)	127	217	408	487	532	499	454	5.5%	6.5%	1.8%	0.9%	-0.6%	-0.9%
Total GHG (energy, industry, agriculture)	91	171	262	340	389	388	354	6.4%	4.4%	2.7%	1.4%	0.0%	-0.9%
CO <sub>2</sub>	64	133	215	279	325	344	315	7.6%	4.9%	2.6%	1.6%	0.6%	-0.9%
CH <sub>4</sub>	18	28	33	43	43	26	21	4.4%	1.7%	2.8%	-0.1%	-4.9%	-2.0%
N <sub>2</sub> O	9	9	13	16	18	17	16	0.1%	3.3%	2.3%	1.4%	-0.9%	-0.1%
F gases	1	1	1	2	3	2	1	0.7%	7.1%	4.2%	2.8%	-3.3%	-3.8%
Total GHG from Energy and Industry	79	158	246	321	368	369	335	7.2%	4.5%	2.7%	1.4%	0.0%	-1.0%
CO <sub>2</sub> Emissions from Fuel Comb.	59	122	196	253	294	310	282	7.6%	4.8%	2.6%	1.5%	0.5%	-1.0%
Power generation/District heating	16	37	96	118	139	139	111	9.1%	9.9%	2.1%	1.7%	0.0%	-2.3%
Industry	15	29	31	47	52	52	47	6.7%	0.9%	4.0%	1.1%	0.1%	-1.0%
Buildings	2	4	6	6	9	12	14	7.0%	3.6%	-0.5%	4.1%	3.0%	1.4%
Agriculture	0	0	3	4	4	5	4	n.s.	25.9%	0.7%	1.8%	0.6%	-0.9%
Transport	15	31	40	52	55	61	65	7.9%	2.6%	2.5%	0.5%	1.1%	0.5%
Other	11	20	19	28	35	41	41	6.0%	-0.9%	4.0%	2.5%	1.6%	0.0%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	4	29	n.s.	n.s.	n.s.	n.s.	n.s.	23.1%
Coal	0	0	0	0	0	2	16	n.s.	n.s.	n.s.	n.s.	n.s.	22.0%
Gas	0	0	0	0	0	1	13	n.s.	n.s.	n.s.	n.s.	n.s.	24.6%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	22.5%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	47	77	92	124	136	109	88	5.0%	1.8%	3.0%	1.0%	-2.2%	-2.1%
Coal	0	0	2	2	3	3	3	14.0%	19.6%	3.0%	2.6%	0.7%	0.3%
Oil	31	36	35	51	43	24	14	1.5%	-0.1%	3.7%	-1.7%	-5.4%	-5.3%
Natural gas	14	38	52	63	78	62	45	10.4%	3.0%	1.9%	2.2%	-2.3%	-3.1%
Biomass	1	2	2	6	10	14	17	1.8%	2.2%	11.0%	4.9%	3.6%	1.4%
Nuclear <sup>1</sup>	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	16.3%	10.1%
Hydro	0	1	1	1	1	2	2	5.7%	-0.7%	8.9%	0.4%	1.2%	0.9%
Other renewables	0	0	0	0	1	2	5	n.s.	n.s.	n.s.	13.3%	12.9%	8.8%
Net Imports	- 25	- 28	- 16	- 25	- 20	22	49						
Coal	1	2	13	20	22	20	19						
Oil	- 18	- 16	- 9	- 16	- 8	12	21						
Natural gas	- 7	- 14	- 21	- 27	- 29	- 2	15						
Biomass	0	0	0	- 3	- 5	- 7	- 6						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	22	49	75	98	116	131	137	8.2%	4.4%	2.7%	1.7%	1.2%	0.5%
Coal	1	2	15	23	25	23	22	5.7%	20.3%	4.4%	1.1%	-0.8%	-0.3%
Oil	12	19	27	35	35	36	35	4.7%	3.3%	2.6%	0.0%	0.4%	-0.2%
Natural gas	7	25	31	36	50	60	60	13.6%	2.4%	1.5%	3.3%	1.9%	0.1%
Biomass	1	2	2	4	5	7	10	1.8%	2.2%	5.5%	2.3%	4.0%	3.7%
Nuclear <sup>1</sup>	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	16.3%	10.1%
Hydro	0	1	1	1	1	2	2	5.7%	-0.7%	8.9%	0.4%	1.2%	0.9%
Other renewables	0	0	0	0	1	2	5	n.s.	n.s.	n.s.	13.3%	12.9%	8.8%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	22	49	75	98	116	131	137	8.2%	4.4%	2.7%	1.7%	1.2%	0.5%
Energy for Power Generation	5	15	33	39	47	53	57	10.8%	8.0%	1.7%	2.0%	1.2%	0.7%
Other Energy Transformation & Losses	5	9	8	13	17	20	22	6.7%	-0.8%	4.5%	2.7%	1.8%	0.9%
Final consumption	14	30	44	61	71	80	85	8.0%	4.0%	3.3%	1.5%	1.2%	0.6%
Steel, Non-Met. Minerals and Chem.	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	16.9%	5.5%	1.7%
Other Industry	5	12	13	18	21	21	19	7.9%	1.3%	3.1%	1.3%	0.2%	-0.9%
Non-Energy Use	1	2	6	11	12	11	10	10.4%	11.0%	6.0%	0.3%	-0.3%	-1.2%
Residential	2	3	4	5	6	7	8	4.2%	3.5%	2.1%	1.6%	1.4%	0.9%
Services	1	2	4	6	9	13	18	10.9%	6.9%	3.2%	4.3%	4.0%	2.9%
Agriculture	0	0	1	1	1	2	2	n.s.	26.2%	0.9%	1.8%	1.5%	1.2%
Road	5	11	15	19	20	23	25	8.5%	3.3%	2.7%	0.7%	1.3%	1.0%
Rail	0	0	0	0	0	0	0	n.s.	15.1%	4.8%	3.2%	2.5%	2.0%
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other Transport	0	0	0	0	0	0	0	-20.8%	11.6%	-6.5%	2.8%	1.4%	0.6%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Malaysia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>5</b>	<b>15</b>	<b>32</b>	<b>37</b>	<b>45</b>	<b>49</b>	<b>49</b>	<b>11.1%</b>	<b>8.2%</b>	<b>1.5%</b>	<b>2.0%</b>	<b>0.8%</b>	<b>0.0%</b>
Coal	1	1	13	20	21	19	18	6.3%	24.1%	4.3%	0.8%	-1.1%	-0.5%
Oil	3	1	1	1	1	1	1	-10.6%	-2.5%	4.1%	-0.8%	2.7%	0.4%
Gas	1	12	18	15	22	27	27	24.4%	4.1%	-1.7%	3.6%	2.1%	0.0%
Biomass & Waste	0	0	0	1	1	2	3	n.s.	n.s.	10.9%	-0.2%	6.6%	3.5%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>23</b>	<b>69</b>	<b>125</b>	<b>181</b>	<b>235</b>	<b>286</b>	<b>335</b>	<b>11.6%</b>	<b>6.1%</b>	<b>3.8%</b>	<b>2.6%</b>	<b>2.0%</b>	<b>1.6%</b>
Coal	3	8	43	84	94	87	84	10.1%	18.7%	6.9%	1.2%	-0.8%	-0.3%
of which CCS	0	0	0	0	0	3	22	n.s.	n.s.	n.s.	n.s.	n.s.	22.1%
Oil	11	4	4	5	4	5	6	-10.2%	0.2%	2.3%	-0.9%	2.6%	0.7%
Gas	6	51	71	73	109	141	148	24.9%	3.3%	0.3%	4.2%	2.6%	0.5%
of which CCS	0	0	0	0	0	4	38	n.s.	n.s.	n.s.	n.s.	n.s.	24.6%
Biomass & Waste	0	0	1	3	3	7	11	n.s.	n.s.	10.9%	-0.2%	9.8%	4.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	1	3	7	n.s.	n.s.	n.s.	n.s.	16.4%	10.2%
Hydro	4	7	6	15	16	18	19	5.7%	-0.7%	8.9%	0.4%	1.2%	0.9%
Wind	0	0	0	0	2	10	28	n.s.	n.s.	n.s.	17.8%	17.1%	10.4%
Solar	0	0	0	2	5	15	30	n.s.	n.s.	n.s.	11.9%	10.7%	7.4%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	26.7%	18.3%	12.2%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>5</b>	<b>14</b>	<b>27</b>	<b>41</b>	<b>49</b>	<b>63</b>	<b>86</b>	<b>11.4%</b>	<b>7.0%</b>	<b>4.3%</b>	<b>1.6%</b>	<b>2.7%</b>	<b>3.1%</b>
Coal	1	1	8	13	15	14	15	0.8%	19.4%	5.3%	1.5%	-0.4%	0.2%
of which CCS	0	0	0	0	0	0	3	n.s.	n.s.	n.s.	n.s.	n.s.	22.6%
Oil	1	2	2	2	1	1	1	4.7%	-3.6%	3.9%	-6.8%	-1.1%	2.7%
Gas	1	8	15	19	22	26	28	24.4%	6.6%	2.3%	1.5%	1.7%	0.8%
of which CCS	0	0	0	0	0	1	5	n.s.	n.s.	n.s.	n.s.	n.s.	25.2%
Biomass & Waste	0	0	1	1	0	1	2	n.s.	20.9%	-2.6%	-1.6%	8.7%	5.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	16.2%	10.0%
Hydro	1	2	2	5	6	6	7	6.6%	0.1%	9.7%	0.4%	1.2%	0.9%
Wind	0	0	0	0	1	4	11	n.s.	n.s.	n.s.	17.6%	16.9%	10.3%
Solar	0	0	0	1	4	10	21	n.s.	n.s.	n.s.	11.9%	10.6%	7.3%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.8%	11.7%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>14</b>	<b>30</b>	<b>44</b>	<b>61</b>	<b>71</b>	<b>80</b>	<b>85</b>	<b>8.0%</b>	<b>4.0%</b>	<b>3.3%</b>	<b>1.5%</b>	<b>1.2%</b>	<b>0.6%</b>
Coal	1	1	2	3	4	4	4	6.8%	6.3%	4.5%	2.7%	0.8%	0.3%
Oil	9	18	25	30	30	31	31	7.1%	3.2%	2.1%	0.0%	0.3%	-0.3%
Gas	1	4	6	12	16	18	18	13.5%	4.9%	6.5%	2.9%	1.6%	0.0%
Electricity	2	5	10	14	18	22	26	11.9%	6.1%	3.8%	2.6%	2.0%	1.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	18.8%
Biomass & Other	1	2	2	2	3	4	6	1.8%	-0.3%	3.3%	2.6%	3.3%	3.6%
Share of Renewables <sup>3</sup> (%)	13%	8%	6%	8%	9%	12%	19%	-5.0%	-3.2%	2.9%	1.2%	3.7%	4.3%
<b>Industry (incl. non-energy use)</b>	<b>6</b>	<b>14</b>	<b>20</b>	<b>30</b>	<b>34</b>	<b>35</b>	<b>32</b>	<b>8.2%</b>	<b>3.5%</b>	<b>4.2%</b>	<b>1.3%</b>	<b>0.3%</b>	<b>-0.8%</b>
Coal	1	1	2	3	4	4	4	6.8%	6.3%	4.5%	2.7%	0.8%	0.3%
Oil	4	6	7	9	8	7	6	5.1%	2.1%	2.4%	-1.0%	-1.3%	-2.3%
Gas	1	4	6	11	13	14	13	13.5%	4.5%	6.2%	1.9%	0.8%	-0.9%
Electricity	1	3	5	6	8	8	8	12.9%	4.9%	3.6%	2.1%	0.2%	-0.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	2	2.5%	n.s.	n.s.	10.0%	7.4%	3.6%
<b>Buildings</b>	<b>3</b>	<b>5</b>	<b>9</b>	<b>11</b>	<b>15</b>	<b>21</b>	<b>26</b>	<b>6.5%</b>	<b>5.1%</b>	<b>2.7%</b>	<b>3.1%</b>	<b>3.0%</b>	<b>2.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	2	1	1	1	1	7.0%	3.5%	-2.8%	-1.8%	-1.9%	-1.7%
Gas	0	0	0	1	2	4	5	7.4%	8.2%	31.8%	14.4%	5.7%	2.3%
Electricity	1	2	5	7	10	13	17	10.7%	7.3%	4.0%	3.0%	3.2%	2.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	18.8%
Biomass & Other	1	1	2	2	2	2	3	1.6%	1.8%	1.1%	0.8%	1.0%	1.3%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>n.s.</b>	<b>26.2%</b>	<b>0.9%</b>	<b>1.8%</b>	<b>1.5%</b>	<b>1.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	1	1	1	1	1	n.s.	25.9%	0.7%	1.8%	0.6%	-0.9%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	n.s.	n.s.	5.2%	2.8%	7.0%	7.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	13.3%
<b>Transport</b>	<b>5</b>	<b>11</b>	<b>15</b>	<b>19</b>	<b>20</b>	<b>23</b>	<b>26</b>	<b>8.4%</b>	<b>3.3%</b>	<b>2.7%</b>	<b>0.7%</b>	<b>1.3%</b>	<b>1.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	5	10	14	18	19	22	23	8.4%	3.1%	2.5%	0.5%	1.1%	0.5%
Gas	0	0	0	0	0	0	1	n.s.	42.2%	1.5%	0.8%	2.2%	5.3%
Electricity	0	0	0	0	0	0	1	n.s.	15.1%	5.2%	17.9%	9.3%	5.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	2	n.s.	n.s.	50.8%	6.4%	5.3%	7.2%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>5</b>	<b>9</b>	<b>8</b>	<b>13</b>	<b>17</b>	<b>20</b>	<b>22</b>	<b>6.7%</b>	<b>-0.8%</b>	<b>4.5%</b>	<b>2.7%</b>	<b>1.8%</b>	<b>0.9%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Thailand	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	57	63	67	69	68	66	62	1.0%	0.6%	0.3%	0.0%	-0.3%	-0.6%
GDP per capita (ppp, k\$'05)	4	6	8	10	15	21	28	3.4%	3.7%	2.5%	3.7%	3.7%	3.0%
GDP per capita (mer, k\$'05)	2	2	3	4	6	8	11	3.4%	3.7%	2.5%	3.7%	3.7%	3.0%
Share Value Added - Agriculture (%)	14	9	10	10	9	9	9	-3.8%	1.1%	-0.6%	-0.6%	-0.4%	-0.2%
Share Value Added - Industry (%)	36	39	37	35	33	29	26	0.8%	-0.6%	-0.5%	-0.7%	-1.1%	-1.3%
Share Value Added - Services (%)	50	51	53	55	58	62	66	0.2%	0.2%	0.4%	0.5%	0.7%	0.6%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	21	23	-7.8%	10.3%	-2.2%	1.6%	1.4%	0.9%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	28	24	47	43	47	64	85	-1.2%	6.8%	-0.9%	0.9%	3.1%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	206	278	376	444	413	455	466	3.0%	3.1%	1.7%	-0.7%	1.0%	0.2%
Total GHG (excl. sinks)	206	284	394	451	443	484	501	3.2%	3.3%	1.4%	-0.2%	0.9%	0.3%
Total GHG (energy, industry, agriculture)	188	268	378	450	443	482	486	3.6%	3.5%	1.8%	-0.2%	0.8%	0.1%
CO <sub>2</sub>	89	169	260	332	345	381	386	6.6%	4.4%	2.5%	0.4%	1.0%	0.1%
CH <sub>4</sub>	82	81	97	95	77	78	76	0.0%	1.8%	-0.2%	-2.1%	0.1%	-0.2%
N <sub>2</sub> O	16	16	20	23	21	23	24	0.2%	2.4%	1.3%	-0.8%	0.8%	0.6%
F gases	1	1	0	0	0	0	0	-2.4%	-8.4%	-2.4%	-6.0%	0.9%	0.4%
Total GHG from Energy and Industry	117	203	303	374	379	417	421	5.6%	4.1%	2.1%	0.1%	1.0%	0.1%
CO <sub>2</sub> Emissions from Fuel Comb.	79	154	241	311	321	356	360	7.0%	4.6%	2.6%	0.3%	1.0%	0.1%
Power generation/District heating	27	53	81	82	74	76	70	7.1%	4.3%	0.0%	-1.0%	0.3%	-0.8%
Industry	13	31	61	90	94	101	100	9.6%	6.9%	4.0%	0.5%	0.7%	-0.1%
Buildings	3	5	8	11	14	18	22	6.0%	5.8%	2.9%	1.9%	2.8%	1.8%
Agriculture	6	9	11	13	12	10	8	4.5%	2.1%	1.9%	-0.7%	-1.7%	-2.1%
Transport	27	44	60	85	91	105	111	4.9%	3.1%	3.6%	0.6%	1.4%	0.6%
Other	3	11	20	29	36	46	50	13.0%	6.1%	3.7%	2.1%	2.4%	0.9%
CO <sub>2</sub> captured (CCS)	0	0	0	0	3	23	50	n.s.	n.s.	n.s.	n.s.	20.7%	8.0%
Coal	0	0	0	0	1	8	21	n.s.	n.s.	n.s.	n.s.	21.6%	10.3%
Gas	0	0	0	0	2	15	28	n.s.	n.s.	n.s.	n.s.	20.4%	6.5%
Biomass	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	10.2%	18.1%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	22	42	73	67	60	54	54	6.7%	5.6%	-0.8%	-1.1%	-1.0%	-0.1%
Coal	4	6	6	5	5	6	8	4.5%	-0.1%	-0.8%	-0.2%	1.8%	2.6%
Oil	3	9	19	15	6	2	0	11.5%	7.7%	-2.1%	-9.0%	-12.7%	-12.4%
Natural gas	5	17	30	23	19	14	10	11.9%	6.1%	-2.6%	-1.8%	-3.1%	-3.6%
Biomass	9	10	17	19	23	24	24	0.7%	5.8%	1.0%	1.9%	0.2%	0.3%
Nuclear <sup>1</sup>	0	0	0	0	1	2	4	n.s.	n.s.	n.s.	n.s.	11.7%	5.9%
Hydro	0	1	0	1	1	1	1	1.9%	-0.8%	1.9%	1.3%	0.5%	0.6%
Other renewables	0	0	0	3	5	6	7	n.s.	9.7%	n.s.	3.9%	1.6%	1.2%
Net Imports	14	26	40	76	98	128	142						
Coal	0	2	11	15	9	9	9						
Oil	15	23	26	45	56	64	63						
Natural gas	0	1	3	16	32	55	68						
Biomass	0	0	0	0	-1	0	0						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	0	0	1	1	1	1						
Primary Energy Demand <sup>2</sup>	36	68	113	143	158	182	196	6.6%	5.3%	2.4%	1.0%	1.4%	0.7%
Coal	4	8	17	20	15	15	18	8.1%	8.0%	2.0%	-3.2%	0.2%	1.7%
Oil	18	32	45	60	62	65	64	6.2%	3.5%	2.9%	0.3%	0.5%	-0.2%
Natural gas	5	17	33	39	52	69	78	13.3%	6.6%	1.7%	2.8%	3.0%	1.2%
Biomass	9	10	17	19	22	23	24	0.7%	5.8%	0.9%	1.8%	0.3%	0.3%
Nuclear <sup>1</sup>	0	0	0	0	1	2	4	n.s.	n.s.	n.s.	n.s.	11.7%	5.9%
Hydro	0	1	0	1	1	1	1	1.9%	-0.8%	1.9%	1.3%	0.5%	0.6%
Other renewables	0	0	0	3	5	6	7	n.s.	9.7%	n.s.	3.9%	1.6%	1.2%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	36	68	113	143	158	182	196	6.6%	5.3%	2.4%	1.0%	1.4%	0.7%
Energy for Power Generation	9	20	33	34	38	49	59	8.1%	5.0%	0.5%	1.1%	2.6%	1.8%
Other Energy Transformation & Losses	1	5	10	14	19	24	28	14.1%	6.7%	3.4%	3.0%	2.5%	1.4%
Final consumption	28	50	84	112	121	134	140	5.8%	5.3%	2.9%	0.8%	1.1%	0.4%
Steel, Non-Met. Minerals and Chem.	2	6	12	17	19	20	20	10.4%	7.0%	4.1%	0.9%	0.7%	-0.3%
Other Industry	6	10	15	18	20	21	21	5.5%	3.6%	2.1%	1.1%	0.6%	-0.1%
Non-Energy Use	0	6	18	23	24	24	22	29.1%	12.3%	2.6%	0.2%	0.2%	-0.7%
Residential	8	8	11	14	14	15	14	0.1%	3.9%	2.4%	0.0%	0.3%	-0.1%
Services	1	3	6	7	9	13	18	8.2%	6.1%	2.2%	2.8%	3.9%	2.8%
Agriculture	2	3	3	4	5	6	6	4.5%	2.1%	2.0%	1.4%	1.2%	0.8%
Road	9	15	19	28	30	35	38	5.4%	2.9%	3.6%	0.8%	1.6%	0.9%
Rail	0	0	0	0	0	0	0	-0.6%	-1.1%	1.2%	1.1%	1.2%	0.9%
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other Transport	0	0	0	0	0	0	0	-16.2%	2.7%	8.4%	1.3%	0.9%	0.0%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Thailand	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>9</b>	<b>20</b>	<b>32</b>	<b>30</b>	<b>32</b>	<b>41</b>	<b>48</b>	<b>8.3%</b>	<b>5.1%</b>	<b>-0.6%</b>	<b>0.5%</b>	<b>2.5%</b>	<b>1.7%</b>
Coal	3	4	7	9	7	8	10	5.0%	5.2%	3.1%	-2.9%	0.9%	2.5%
Oil	2	2	0	0	1	2	4	-0.9%	-19.6%	6.3%	9.6%	7.1%	4.3%
Gas	4	13	23	18	20	26	29	12.8%	5.9%	-2.1%	0.7%	2.9%	1.1%
Biomass & Waste	0	0	2	2	4	5	6	n.s.	17.5%	-1.2%	7.2%	1.6%	1.8%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>44</b>	<b>96</b>	<b>160</b>	<b>194</b>	<b>227</b>	<b>292</b>	<b>348</b>	<b>8.1%</b>	<b>5.2%</b>	<b>2.0%</b>	<b>1.6%</b>	<b>2.5%</b>	<b>1.8%</b>
Coal	11	18	30	40	31	35	46	4.9%	5.4%	2.9%	-2.5%	1.1%	2.7%
of which CCS	0	0	0	0	1	10	28	n.s.	n.s.	n.s.	n.s.	22.4%	10.8%
Oil	10	10	1	2	5	10	15	-0.3%	-19.3%	5.0%	9.8%	7.2%	4.6%
Gas	18	62	119	100	108	144	164	13.2%	6.8%	-1.8%	0.8%	2.9%	1.3%
of which CCS	0	0	0	0	7	44	83	n.s.	n.s.	n.s.	n.s.	20.7%	6.6%
Biomass & Waste	0	1	3	5	13	17	22	n.s.	20.9%	4.5%	9.9%	2.4%	2.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	3	8	15	n.s.	n.s.	n.s.	n.s.	11.8%	5.9%
Hydro	5	6	6	7	8	8	9	1.9%	-0.8%	1.9%	1.3%	0.5%	0.6%
Wind	0	0	0	30	35	41	40	n.s.	n.s.	n.s.	1.5%	1.5%	-0.1%
Solar	0	0	0	10	24	28	37	n.s.	n.s.	n.s.	9.0%	1.8%	2.8%
Other	0	0	0	0	0	0	1	7.2%	0.5%	1.6%	31.1%	16.8%	13.3%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>10</b>	<b>27</b>	<b>41</b>	<b>65</b>	<b>78</b>	<b>82</b>	<b>91</b>	<b>10.9%</b>	<b>4.2%</b>	<b>4.7%</b>	<b>1.8%</b>	<b>0.5%</b>	<b>1.1%</b>
Coal	1	3	4	6	7	5	6	5.7%	4.3%	5.1%	0.1%	-2.5%	2.3%
of which CCS	0	0	0	0	0	1	4	n.s.	n.s.	n.s.	n.s.	22.6%	10.8%
Oil	3	6	10	6	5	2	3	7.0%	5.6%	-5.2%	-2.6%	-6.9%	3.3%
Gas	3	15	21	24	24	25	26	17.7%	3.4%	1.4%	-0.1%	0.4%	0.1%
of which CCS	0	0	0	0	1	6	11	n.s.	n.s.	n.s.	n.s.	21.3%	6.6%
Biomass & Waste	0	0	1	1	3	3	3	n.s.	9.8%	3.9%	6.2%	0.4%	1.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	11.6%	5.7%
Hydro	2	3	5	6	7	7	8	3.5%	3.9%	2.7%	1.3%	0.5%	0.6%
Wind	0	0	0	13	15	17	16	n.s.	n.s.	n.s.	1.4%	1.3%	-0.8%
Solar	0	0	0	7	17	20	26	n.s.	n.s.	n.s.	9.0%	1.7%	2.7%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.3%	12.8%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>28</b>	<b>50</b>	<b>84</b>	<b>112</b>	<b>121</b>	<b>134</b>	<b>140</b>	<b>5.8%</b>	<b>5.3%</b>	<b>2.9%</b>	<b>0.8%</b>	<b>1.1%</b>	<b>0.4%</b>
Coal	1	3	9	10	7	7	7	12.4%	11.3%	1.5%	-3.8%	-0.3%	0.8%
Oil	15	29	43	57	58	60	57	6.8%	4.1%	2.9%	0.2%	0.3%	-0.5%
Gas	0	1	5	12	21	27	31	23.1%	15.2%	10.3%	5.3%	2.9%	1.2%
Electricity	3	8	13	16	19	24	28	8.7%	5.4%	2.2%	1.6%	2.4%	1.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	18.9%	9.1%
Biomass & Other	9	9	14	16	17	17	16	0.2%	4.4%	1.0%	0.5%	0.0%	-0.1%
Share of Renewables <sup>3</sup> (%)	32%	21%	21%	22%	23%	22%	23%	-4.2%	0.3%	0.1%	0.8%	-0.4%	0.2%
<b>Industry (incl. non-energy use)</b>	<b>9</b>	<b>22</b>	<b>44</b>	<b>58</b>	<b>62</b>	<b>65</b>	<b>63</b>	<b>9.7%</b>	<b>7.3%</b>	<b>2.9%</b>	<b>0.7%</b>	<b>0.5%</b>	<b>-0.4%</b>
Coal	1	3	9	10	7	7	7	12.4%	11.3%	1.5%	-3.8%	-0.3%	0.8%
Oil	3	10	19	25	25	23	20	12.3%	7.2%	2.7%	-0.1%	-0.6%	-1.7%
Gas	0	1	3	9	16	21	22	23.1%	10.9%	11.6%	5.7%	2.5%	0.6%
Electricity	2	3	5	7	7	8	8	8.4%	4.7%	2.2%	0.8%	0.8%	-0.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	3	4	7	7	7	6	6	4.0%	5.0%	-0.5%	0.2%	-0.7%	-0.9%
<b>Buildings</b>	<b>9</b>	<b>11</b>	<b>17</b>	<b>21</b>	<b>23</b>	<b>28</b>	<b>32</b>	<b>1.9%</b>	<b>4.6%</b>	<b>2.4%</b>	<b>1.0%</b>	<b>1.8%</b>	<b>1.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	2	3	3	2	2	1	6.0%	5.8%	0.5%	-3.7%	-2.5%	-2.0%
Gas	0	0	0	1	3	6	8	n.s.	n.s.	n.s.	12.3%	5.8%	2.8%
Electricity	2	4	7	9	11	14	18	8.9%	6.0%	2.1%	1.7%	2.9%	2.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	18.9%	9.1%
Biomass & Other	6	5	7	8	8	7	6	-2.1%	2.9%	2.1%	-0.9%	-1.4%	-1.7%
<b>Agriculture</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>4.5%</b>	<b>2.1%</b>	<b>2.0%</b>	<b>1.4%</b>	<b>1.2%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	3	3	4	4	3	3	4.5%	2.1%	1.9%	-0.7%	-1.7%	-2.1%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	1	1	4.8%	8.1%	6.9%	18.9%	8.5%	4.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	2	2	n.s.	n.s.	n.s.	35.1%	8.1%	3.7%
<b>Transport</b>	<b>9</b>	<b>15</b>	<b>20</b>	<b>28</b>	<b>30</b>	<b>35</b>	<b>39</b>	<b>4.9%</b>	<b>2.9%</b>	<b>3.6%</b>	<b>0.8%</b>	<b>1.6%</b>	<b>0.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	9	15	17	25	28	32	34	4.9%	1.7%	3.7%	0.9%	1.5%	0.5%
Gas	0	0	1	2	1	1	1	n.s.	n.s.	2.4%	-6.6%	-1.2%	3.6%
Electricity	0	0	0	0	0	1	1	n.s.	6.6%	13.8%	23.6%	11.3%	6.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	1	1	2	2	3	n.s.	n.s.	3.6%	5.6%	3.0%	3.0%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>1</b>	<b>5</b>	<b>10</b>	<b>14</b>	<b>19</b>	<b>24</b>	<b>28</b>	<b>14.1%</b>	<b>6.7%</b>	<b>3.4%</b>	<b>3.0%</b>	<b>2.5%</b>	<b>1.4%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Vietnam	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	68	80	88	98	105	110	113	1.6%	1.0%	1.1%	0.7%	0.4%	0.3%
GDP per capita (ppp, k\$'05)	1	2	3	5	8	12	16	5.8%	5.6%	5.0%	4.8%	4.1%	3.3%
GDP per capita (mer, k\$'05)	0	1	1	1	2	3	5	5.8%	5.6%	5.0%	4.8%	4.1%	3.3%
Share Value Added - Agriculture (%)	14	9	10	8	7	6	6	-3.8%	1.1%	-2.2%	-1.5%	-0.9%	-0.5%
Share Value Added - Industry (%)	36	39	37	37	37	35	33	0.8%	-0.6%	0.1%	-0.1%	-0.5%	-0.7%
Share Value Added - Services (%)	50	51	53	54	56	58	61	0.2%	0.2%	0.3%	0.3%	0.4%	0.5%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	21	23	-7.8%	10.3%	-2.2%	1.6%	1.4%	0.9%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	28	24	47	43	47	64	85	-1.2%	6.8%	-0.9%	0.9%	3.1%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	112	100	275	421	536	600	581	-1.1%	10.6%	4.4%	2.5%	1.1%	-0.3%
Total GHG (excl. sinks)	112	144	290	433	552	628	620	2.6%	7.3%	4.1%	2.5%	1.3%	-0.1%
Total GHG (energy, industry, agriculture)	89	144	289	433	548	622	612	4.9%	7.2%	4.1%	2.4%	1.3%	-0.2%
CO <sub>2</sub>	20	52	149	268	376	451	455	10.0%	11.1%	6.0%	3.4%	1.8%	0.1%
CH <sub>4</sub>	59	74	109	119	119	115	103	2.3%	4.0%	0.9%	-0.1%	-0.3%	-1.0%
N <sub>2</sub> O	10	18	31	46	54	56	54	5.7%	5.4%	4.0%	1.6%	0.4%	-0.4%
F gases	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Total GHG from Energy and Industry	36	78	205	320	423	498	502	8.2%	10.1%	4.5%	2.8%	1.7%	0.1%
CO <sub>2</sub> Emissions from Fuel Comb.	17	44	126	223	305	365	363	9.9%	11.1%	5.9%	3.2%	1.8%	-0.1%
Power generation/District heating	5	11	41	90	129	154	139	9.1%	13.7%	8.2%	3.7%	1.8%	-1.0%
Industry	6	14	42	73	99	110	107	9.9%	11.4%	5.8%	3.0%	1.1%	-0.3%
Buildings	2	7	11	13	17	23	25	13.0%	5.4%	1.1%	3.2%	2.6%	1.0%
Agriculture	1	1	2	2	3	3	3	5.0%	3.8%	1.8%	2.3%	1.6%	0.4%
Transport	4	11	28	41	52	70	82	9.8%	10.4%	3.8%	2.4%	2.9%	1.7%
Other	0	0	1	4	5	6	7	-0.7%	53.3%	9.9%	2.4%	2.7%	1.5%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	9	n.s.	n.s.	n.s.	n.s.	n.s.	38.6%
Coal	0	0	0	0	0	0	8	n.s.	n.s.	n.s.	n.s.	n.s.	41.4%
Gas	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	27.0%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	21.1%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	18	40	66	65	56	61	69	8.3%	5.2%	-0.1%	-1.5%	1.0%	1.2%
Coal	3	7	26	14	0	0	0	10.0%	14.2%	-6.0%	n.s.	n.s.	n.s.
Oil	3	17	15	18	17	16	14	19.9%	-0.7%	1.4%	-0.2%	-0.7%	-1.2%
Natural gas	0	1	8	11	14	19	22	44.5%	19.4%	3.5%	2.8%	2.5%	1.7%
Biomass	12	13	14	15	16	17	19	1.2%	0.3%	1.0%	0.5%	0.5%	1.1%
Nuclear <sup>1</sup>	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	12.4%	9.4%
Hydro	0	1	2	5	5	5	6	10.5%	6.6%	7.8%	0.1%	0.4%	0.4%
Other renewables	0	0	0	2	2	4	6	n.s.	n.s.	n.s.	3.3%	4.6%	5.8%
Net Imports	0	-12	-8	24	62	81	83						
Coal	0	-3	-12	18	43	47	44						
Oil	0	-9	3	6	12	21	26						
Natural gas	0	0	0	0	6	12	12						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	17	28	58	89	117	142	152	4.9%	7.6%	4.4%	2.8%	1.9%	0.7%
Coal	2	4	15	32	43	47	44	7.0%	12.9%	8.1%	3.0%	1.0%	-0.7%
Oil	3	8	19	24	30	37	41	11.2%	9.1%	2.3%	2.4%	2.3%	0.9%
Natural gas	0	1	8	11	21	30	34	n.s.	21.9%	3.5%	6.2%	3.9%	1.1%
Biomass	12	13	14	15	16	17	19	1.2%	0.3%	1.1%	0.4%	0.5%	1.0%
Nuclear <sup>1</sup>	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	12.4%	9.4%
Hydro	0	1	2	5	5	5	6	10.5%	6.6%	7.8%	0.1%	0.4%	0.4%
Other renewables	0	0	0	2	2	4	6	n.s.	n.s.	n.s.	3.3%	4.6%	5.8%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	17	28	58	89	117	142	152	4.9%	7.6%	4.4%	2.8%	1.9%	0.7%
Energy for Power Generation	2	5	16	33	46	56	60	10.8%	12.8%	7.5%	3.3%	2.1%	0.6%
Other Energy Transformation & Losses	0	0	1	-1	0	2	4	n.s.	n.s.	n.s.	n.s.	20.6%	8.6%
Final consumption	16	25	48	71	91	109	118	4.6%	6.8%	4.0%	2.5%	1.8%	0.8%
Steel, Non-Met. Minerals and Chem.	0	0	6	15	20	22	20	n.s.	n.s.	9.5%	2.9%	0.8%	-0.5%
Other Industry	5	8	11	17	23	28	30	5.7%	3.8%	3.9%	3.2%	2.0%	0.5%
Non-Energy Use	0	0	2	3	3	4	4	16.9%	32.8%	1.3%	3.1%	1.8%	0.3%
Residential	10	12	16	19	20	21	21	2.4%	2.9%	1.6%	0.6%	0.6%	0.1%
Services	0	1	2	3	4	7	9	12.7%	4.8%	4.6%	4.9%	4.3%	2.7%
Agriculture	0	0	1	1	1	1	2	5.4%	3.8%	3.0%	2.5%	2.1%	1.7%
Road	1	3	10	15	19	26	31	10.3%	11.4%	4.0%	2.7%	3.1%	2.0%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Aviation	0	0	0	0	0	0	0	1.5%	3.9%	3.2%	1.0%	0.9%	0.3%
Other Transport	0	0	0	0	0	0	0	18.2%	8.3%	-3.1%	4.0%	2.6%	1.4%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Vietnam	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>1</b>	<b>4</b>	<b>14</b>	<b>26</b>	<b>38</b>	<b>46</b>	<b>46</b>	<b>10.9%</b>	<b>14.4%</b>	<b>6.7%</b>	<b>3.8%</b>	<b>2.0%</b>	<b>-0.1%</b>
Coal	1	1	5	17	24	28	26	2.6%	15.5%	13.4%	3.7%	1.4%	-0.6%
Oil	0	1	1	1	1	2	2	13.3%	-1.2%	-1.9%	3.4%	4.6%	0.2%
Gas	0	1	8	8	12	15	15	n.s.	21.4%	0.5%	3.9%	2.6%	0.0%
Biomass & Waste	0	0	0	0	0	1	2	n.s.	n.s.	16.9%	14.7%	11.0%	8.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	2.9%	0.4%	0.5%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>9</b>	<b>27</b>	<b>95</b>	<b>185</b>	<b>246</b>	<b>308</b>	<b>345</b>	<b>11.8%</b>	<b>13.6%</b>	<b>6.9%</b>	<b>2.9%</b>	<b>2.3%</b>	<b>1.2%</b>
Coal	2	3	20	71	102	119	114	4.6%	20.2%	13.6%	3.8%	1.5%	-0.4%
of which CCS	0	0	0	0	0	0	10	n.s.	n.s.	n.s.	n.s.	n.s.	45.1%
Oil	1	5	3	4	6	9	9	13.2%	-2.8%	2.0%	3.3%	4.6%	0.3%
Gas	0	4	44	45	65	86	86	n.s.	26.1%	0.1%	3.9%	2.8%	0.1%
of which CCS	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	n.s.	25.9%
Biomass & Waste	0	0	0	0	1	4	10	n.s.	n.s.	18.5%	15.8%	11.7%	9.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	1	3	8	n.s.	n.s.	n.s.	n.s.	12.5%	9.5%
Hydro	5	15	28	58	59	61	64	10.5%	6.6%	7.8%	0.1%	0.4%	0.4%
Wind	0	0	0	6	8	19	36	n.s.	n.s.	n.s.	3.1%	9.3%	6.8%
Solar	0	0	0	0	1	4	15	n.s.	n.s.	n.s.	16.7%	14.5%	13.0%
Other	0	0	0	1	2	2	2	n.s.	n.s.	n.s.	3.0%	0.8%	1.9%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>2</b>	<b>6</b>	<b>20</b>	<b>43</b>	<b>55</b>	<b>72</b>	<b>88</b>	<b>11.7%</b>	<b>11.7%</b>	<b>8.2%</b>	<b>2.6%</b>	<b>2.6%</b>	<b>2.1%</b>
Coal	1	1	3	11	17	20	21	-1.0%	17.4%	13.3%	4.0%	1.8%	0.4%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	45.5%
Oil	1	2	2	3	4	4	4	8.2%	2.2%	6.0%	1.8%	-0.6%	0.1%
Gas	0	1	6	11	16	21	19	n.s.	19.4%	5.9%	3.3%	2.9%	-0.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	26.4%
Biomass & Waste	0	0	0	0	0	1	1	n.s.	n.s.	12.6%	15.9%	11.8%	9.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	12.2%	9.3%
Hydro	1	3	8	14	14	15	16	16.6%	9.7%	6.0%	0.1%	0.4%	0.4%
Wind	0	0	0	2	3	8	15	n.s.	n.s.	n.s.	3.2%	9.2%	6.6%
Solar	0	0	0	0	1	3	11	n.s.	n.s.	n.s.	16.8%	14.4%	13.0%
Other	0	0	0	0	0	0	0	3.4%	0.0%	10.4%	3.1%	0.7%	1.4%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>16</b>	<b>25</b>	<b>48</b>	<b>71</b>	<b>91</b>	<b>109</b>	<b>118</b>	<b>4.6%</b>	<b>6.8%</b>	<b>4.0%</b>	<b>2.5%</b>	<b>1.8%</b>	<b>0.8%</b>
Coal	1	3	10	15	19	19	18	9.2%	11.8%	4.2%	2.3%	0.3%	-0.9%
Oil	2	7	17	23	29	35	38	10.9%	9.8%	3.4%	2.2%	2.0%	0.9%
Gas	0	0	0	4	9	16	19	n.s.	39.2%	22.4%	9.7%	5.2%	2.0%
Electricity	1	2	7	14	19	24	27	13.7%	14.5%	6.7%	2.8%	2.3%	1.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	36.4%	19.4%
Biomass & Other	12	13	14	15	15	15	16	1.2%	0.3%	0.9%	0.0%	0.0%	0.3%
Share of Renewables <sup>3</sup> (%)	76%	58%	34%	29%	24%	22%	24%	-2.7%	-5.2%	-1.5%	-2.1%	-0.8%	1.1%
<b>Industry (incl. non-energy use)</b>	<b>5</b>	<b>8</b>	<b>20</b>	<b>34</b>	<b>46</b>	<b>54</b>	<b>54</b>	<b>5.8%</b>	<b>9.4%</b>	<b>5.7%</b>	<b>3.1%</b>	<b>1.5%</b>	<b>0.1%</b>
Coal	1	2	8	13	17	18	17	8.5%	13.4%	5.1%	2.5%	0.5%	-0.7%
Oil	0	2	4	6	8	8	7	13.4%	10.3%	3.5%	2.2%	0.3%	-1.3%
Gas	0	0	0	3	7	10	11	n.s.	39.2%	20.2%	7.7%	4.4%	1.3%
Electricity	0	1	4	8	11	14	14	12.3%	17.7%	7.5%	3.1%	1.9%	0.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	3	3	3	3	4	4	5	1.3%	-2.1%	2.0%	1.4%	1.5%	1.4%
<b>Buildings</b>	<b>10</b>	<b>13</b>	<b>18</b>	<b>21</b>	<b>24</b>	<b>28</b>	<b>30</b>	<b>2.9%</b>	<b>3.1%</b>	<b>1.9%</b>	<b>1.2%</b>	<b>1.4%</b>	<b>0.8%</b>
Coal	0	1	2	1	1	1	1	14.3%	6.2%	-1.3%	-0.3%	-1.4%	-3.9%
Oil	0	1	2	2	2	2	2	11.7%	4.6%	1.2%	-0.3%	-0.3%	-0.3%
Gas	0	0	0	1	3	5	7	n.s.	n.s.	n.s.	16.2%	6.7%	2.9%
Electricity	0	1	3	6	7	9	11	15.9%	12.1%	5.5%	2.4%	2.5%	1.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	36.4%	19.4%
Biomass & Other	9	10	11	12	11	10	9	1.2%	1.0%	0.5%	-0.7%	-0.9%	-1.2%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>5.4%</b>	<b>3.8%</b>	<b>3.0%</b>	<b>2.5%</b>	<b>2.1%</b>	<b>1.7%</b>
Coal	0	0	0	0	0	0	0	-9.4%	-2.0%	-0.7%	0.0%	-0.4%	-1.5%
Oil	0	0	1	1	1	1	1	8.8%	4.2%	1.9%	2.3%	1.6%	0.4%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	4.0%	3.5%	8.9%	3.4%	3.2%	3.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	19.3%
<b>Transport</b>	<b>1</b>	<b>3</b>	<b>10</b>	<b>15</b>	<b>19</b>	<b>26</b>	<b>32</b>	<b>9.7%</b>	<b>11.2%</b>	<b>3.9%</b>	<b>2.7%</b>	<b>3.1%</b>	<b>2.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	3	10	15	19	25	29	9.9%	11.2%	3.8%	2.4%	2.8%	1.6%
Gas	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	24.9%	8.5%	8.2%
Electricity	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	14.7%	8.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	15.8%	6.6%	6.9%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>-1</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>20.6%</b>	<b>8.6%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Rest South Asia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	262	333	398	468	531	585	626	2.4%	1.8%	1.6%	1.3%	1.0%	0.7%
GDP per capita (ppp, k\$'05)	1	1	2	3	5	8	12	1.9%	3.4%	3.8%	5.3%	5.2%	4.4%
GDP per capita (mer, k\$'05)	0	1	1	1	2	3	4	1.9%	3.4%	3.8%	5.3%	5.2%	4.4%
Share Value Added - Agriculture (%)	29	26	22	17	13	11	10	-1.1%	-1.7%	-2.6%	-2.8%	-1.6%	-0.9%
Share Value Added - Industry (%)	23	24	24	27	29	29	26	0.4%	-0.2%	1.3%	0.7%	-0.2%	-0.9%
Share Value Added - Services (%)	48	50	54	56	58	61	64	0.4%	0.9%	0.3%	0.4%	0.4%	0.5%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	21	23	-7.8%	10.3%	-2.2%	1.6%	1.4%	0.9%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	28	24	47	43	47	64	85	-1.2%	6.8%	-0.9%	0.9%	3.1%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	445	545	671	875	1 237	1 557	1 714	2.1%	2.1%	2.7%	3.5%	2.3%	1.0%
Total GHG (excl. sinks)	445	545	671	875	1 237	1 557	1 714	2.1%	2.1%	2.7%	3.5%	2.3%	1.0%
Total GHG (energy, industry, agriculture)	347	452	614	821	1 193	1 513	1 675	2.7%	3.1%	2.9%	3.8%	2.4%	1.0%
CO <sub>2</sub>	87	154	242	408	702	1 003	1 141	5.8%	4.6%	5.3%	5.6%	3.6%	1.3%
CH <sub>4</sub>	216	245	307	340	407	418	435	1.3%	2.3%	1.1%	1.8%	0.3%	0.4%
N <sub>2</sub> O	42	52	64	72	82	91	98	2.1%	2.2%	1.1%	1.3%	1.1%	0.8%
F gases	1	1	1	1	2	1	1	-2.1%	3.0%	1.2%	2.4%	-3.8%	0.8%
Total GHG from Energy and Industry	150	239	362	565	932	1 248	1 403	4.7%	4.2%	4.6%	5.1%	3.0%	1.2%
CO <sub>2</sub> Emissions from Fuel Comb.	81	143	221	374	649	929	1 050	5.9%	4.5%	5.4%	5.7%	3.6%	1.2%
Power generation/District heating	20	44	68	93	145	220	239	8.4%	4.3%	3.2%	4.5%	4.3%	0.8%
Industry	25	36	57	78	149	207	228	3.6%	4.9%	3.2%	6.7%	3.3%	1.0%
Buildings	12	17	26	55	123	177	184	3.5%	4.1%	7.8%	8.3%	3.7%	0.4%
Agriculture	2	3	3	5	6	8	9	3.2%	2.7%	3.2%	3.1%	2.6%	1.3%
Transport	19	37	59	133	208	288	352	6.8%	4.8%	8.4%	4.6%	3.3%	2.0%
Other	3	6	7	10	18	29	39	7.8%	2.4%	3.1%	6.0%	5.0%	2.8%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	1	31	n.s.	n.s.	n.s.	n.s.	34.7%	38.4%
Coal	0	0	0	0	0	1	22	n.s.	n.s.	n.s.	n.s.	34.5%	45.4%
Gas	0	0	0	0	0	1	8	n.s.	n.s.	n.s.	n.s.	47.0%	29.5%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	6.8%	5.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	56	77	114	115	106	112	127	3.2%	4.1%	0.1%	-0.9%	0.6%	1.2%
Coal	1	1	2	2	4	7	9	1.9%	4.5%	-0.4%	6.5%	5.3%	2.2%
Oil	3	3	3	4	4	4	4	1.0%	1.3%	0.0%	0.5%	0.0%	0.2%
Natural gas	14	26	51	63	46	40	36	6.0%	7.2%	2.0%	-3.0%	-1.4%	-1.0%
Biomass	36	44	52	40	41	44	45	2.0%	1.7%	-2.4%	0.2%	0.5%	0.3%
Nuclear <sup>1</sup>	0	1	1	2	4	7	12	21.2%	5.5%	7.9%	6.8%	6.3%	5.4%
Hydro	2	2	4	4	5	5	6	0.4%	7.0%	0.1%	1.4%	0.9%	1.1%
Other renewables	0	0	0	0	2	6	15	n.s.	n.s.	43.9%	16.6%	12.9%	10.6%
Net Imports	12	24	25	67	182	287	343						
Coal	1	1	3	10	20	37	48						
Oil	12	24	28	57	85	111	128						
Natural gas	-1	-2	-7	-1	76	137	164						
Biomass	0	0	0	2	1	0	0						
Biofuels	0	0	0	0	0	1	2						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	68	100	139	183	288	399	469	4.0%	3.3%	2.8%	4.7%	3.3%	1.6%
Coal	2	3	6	12	25	44	56	1.1%	8.1%	7.8%	7.3%	6.0%	2.4%
Oil	14	27	32	60	89	115	132	6.7%	1.5%	6.6%	4.0%	2.6%	1.4%
Natural gas	14	24	44	61	122	177	200	5.8%	6.4%	3.3%	7.1%	3.8%	1.2%
Biomass	36	44	52	42	42	44	45	2.0%	1.7%	-2.0%	-0.1%	0.4%	0.3%
Nuclear <sup>1</sup>	0	1	1	2	4	7	12	21.2%	5.5%	7.9%	6.8%	6.3%	5.4%
Hydro	2	2	4	4	5	5	6	0.4%	7.0%	0.1%	1.4%	0.9%	1.1%
Other renewables	0	0	0	0	2	6	15	n.s.	n.s.	43.9%	16.6%	12.9%	10.6%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	68	100	139	183	288	399	469	4.0%	3.3%	2.8%	4.7%	3.3%	1.6%
Energy for Power Generation	10	19	31	40	61	93	121	6.8%	4.9%	2.7%	4.4%	4.2%	2.7%
Other Energy Transformation & Losses	1	3	3	4	10	20	36	11.6%	-0.3%	3.8%	9.4%	7.0%	6.0%
Final consumption	60	84	116	154	242	331	381	3.4%	3.3%	2.8%	4.7%	3.2%	1.4%
Steel, Non-Met. Minerals and Chem.	3	4	7	9	14	19	20	2.7%	5.0%	2.8%	4.6%	3.0%	0.5%
Other Industry	7	11	19	24	52	72	78	4.9%	5.3%	2.6%	7.8%	3.3%	0.8%
Non-Energy Use	4	5	5	7	11	14	16	4.2%	-0.4%	2.8%	4.6%	3.0%	0.9%
Residential	38	48	60	62	79	94	93	2.4%	2.3%	0.3%	2.4%	1.8%	-0.1%
Services	1	2	3	5	10	18	25	5.0%	5.1%	3.7%	7.4%	6.0%	3.1%
Agriculture	1	1	2	3	4	5	6	2.0%	4.0%	3.1%	3.4%	3.2%	2.7%
Road	6	11	18	41	68	100	131	6.2%	5.5%	8.6%	5.2%	3.9%	2.7%
Rail	0	0	0	1	1	1	1	1.5%	0.4%	3.5%	1.8%	2.2%	2.1%
Aviation	0	1	1	1	3	5	9	16.2%	0.1%	4.4%	7.3%	6.7%	5.2%
Other Transport	0	0	0	1	1	2	2	5.2%	9.9%	2.8%	5.5%	4.6%	3.4%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest South Asia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>8</b>	<b>16</b>	<b>25</b>	<b>33</b>	<b>51</b>	<b>75</b>	<b>88</b>	<b>7.8%</b>	<b>4.6%</b>	<b>2.7%</b>	<b>4.4%</b>	<b>3.9%</b>	<b>1.6%</b>
Coal	0	0	0	4	10	24	32	17.8%	12.7%	30.6%	8.9%	8.8%	3.0%
Oil	2	8	9	10	11	8	6	12.6%	2.0%	0.3%	1.1%	-2.5%	-3.5%
Gas	5	8	16	19	30	42	49	4.8%	6.4%	2.0%	4.5%	3.5%	1.6%
Biomass & Waste	0	0	0	0	0	0	1	n.s.	n.s.	11.3%	3.4%	12.7%	10.8%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>52</b>	<b>95</b>	<b>158</b>	<b>206</b>	<b>332</b>	<b>544</b>	<b>772</b>	<b>6.2%</b>	<b>5.2%</b>	<b>2.7%</b>	<b>4.9%</b>	<b>5.1%</b>	<b>3.6%</b>
Coal	0	0	1	17	49	123	167	20.3%	13.0%	35.7%	10.9%	9.7%	3.1%
of which CCS	0	0	0	0	0	1	30	n.s.	n.s.	n.s.	n.s.	n.s.	49.3%
Oil	8	32	40	42	47	37	26	14.2%	2.3%	0.5%	1.0%	-2.4%	-3.3%
Gas	19	36	65	85	145	227	276	6.4%	6.1%	2.7%	5.5%	4.6%	2.0%
of which CCS	0	0	0	0	0	1	9	n.s.	n.s.	n.s.	n.s.	n.s.	32.3%
Biomass & Waste	0	0	0	0	0	1	4	n.s.	n.s.	15.9%	7.2%	16.1%	11.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	2	3	7	15	28	47	21.2%	5.5%	8.1%	7.0%	6.5%	5.5%
Hydro	24	25	49	50	57	63	70	0.4%	7.0%	0.1%	1.4%	0.9%	1.1%
Wind	0	0	0	3	13	40	98	n.s.	41.0%	41.5%	15.4%	12.4%	9.3%
Solar	0	0	0	1	7	25	82	n.s.	7.8%	53.0%	19.3%	13.8%	12.4%
Other	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	28.4%	18.0%	12.1%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>13</b>	<b>24</b>	<b>34</b>	<b>50</b>	<b>71</b>	<b>119</b>	<b>208</b>	<b>6.5%</b>	<b>3.7%</b>	<b>3.9%</b>	<b>3.6%</b>	<b>5.3%</b>	<b>5.7%</b>
Coal	1	1	1	2	7	17	25	2.2%	3.0%	8.5%	11.0%	9.6%	4.0%
of which CCS	0	0	0	0	0	0	4	n.s.	n.s.	n.s.	n.s.	n.s.	49.9%
Oil	3	5	7	14	14	14	16	4.7%	3.4%	7.3%	0.4%	-0.3%	1.2%
Gas	4	10	15	19	25	38	56	10.5%	3.8%	2.3%	2.8%	4.3%	3.9%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	33.1%
Biomass & Waste	0	0	0	0	0	0	1	n.s.	n.s.	5.8%	6.7%	15.7%	12.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	1	2	4	7	13.7%	0.0%	9.4%	6.8%	6.3%	5.3%
Hydro	5	7	11	12	13	15	16	3.7%	4.0%	0.8%	1.4%	0.9%	1.1%
Wind	0	0	0	1	5	17	39	n.s.	29.9%	41.0%	15.2%	12.2%	9.1%
Solar	0	0	0	1	4	15	49	n.s.	n.s.	n.s.	19.2%	13.6%	12.4%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	27.7%	17.5%	11.6%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>60</b>	<b>84</b>	<b>116</b>	<b>154</b>	<b>242</b>	<b>331</b>	<b>381</b>	<b>3.4%</b>	<b>3.3%</b>	<b>2.8%</b>	<b>4.7%</b>	<b>3.2%</b>	<b>1.4%</b>
Coal	2	2	5	8	14	20	23	0.3%	9.0%	3.7%	6.2%	3.5%	1.4%
Oil	11	18	22	49	76	104	124	5.1%	1.6%	8.6%	4.4%	3.2%	1.7%
Gas	8	14	27	40	87	126	138	5.7%	6.7%	4.2%	8.1%	3.7%	0.9%
Electricity	3	6	11	14	23	38	54	6.1%	6.5%	2.7%	4.9%	5.1%	3.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	36	44	52	42	41	43	43	2.0%	1.7%	-2.1%	-0.2%	0.3%	0.1%
Share of Renewables <sup>3</sup> (%)	64%	56%	49%	31%	20%	18%	20%	-1.3%	-1.4%	-4.6%	-4.0%	-1.4%	1.4%
<b>Industry (incl. non-energy use)</b>	<b>14</b>	<b>21</b>	<b>31</b>	<b>40</b>	<b>77</b>	<b>105</b>	<b>114</b>	<b>4.2%</b>	<b>4.0%</b>	<b>2.7%</b>	<b>6.6%</b>	<b>3.2%</b>	<b>0.8%</b>
Coal	2	2	5	7	14	20	23	0.5%	8.5%	3.9%	6.5%	3.6%	1.4%
Oil	2	3	2	4	6	9	10	6.1%	-4.1%	5.3%	5.0%	3.7%	1.3%
Gas	6	9	15	19	37	51	56	4.7%	4.7%	2.3%	7.1%	3.2%	0.9%
Electricity	1	2	4	6	8	11	13	4.6%	7.6%	3.0%	3.6%	3.1%	1.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	3	4	5	5	12	15	12	4.2%	1.9%	0.3%	9.1%	2.3%	-2.0%
<b>Buildings</b>	<b>39</b>	<b>50</b>	<b>63</b>	<b>67</b>	<b>89</b>	<b>113</b>	<b>118</b>	<b>2.5%</b>	<b>2.5%</b>	<b>0.5%</b>	<b>2.9%</b>	<b>2.4%</b>	<b>0.5%</b>
Coal	0	0	0	0	0	0	0	-11.7%	31.8%	0.5%	-0.8%	-1.9%	-4.4%
Oil	2	2	2	3	4	6	6	-0.2%	-2.1%	5.3%	3.6%	2.8%	0.4%
Gas	2	4	8	19	46	68	70	7.8%	6.4%	8.9%	9.3%	3.9%	0.4%
Electricity	2	3	6	8	11	18	25	8.4%	6.0%	2.4%	3.7%	4.8%	3.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	33	40	47	37	27	21	16	1.9%	1.7%	-2.5%	-3.0%	-2.3%	-2.6%
<b>Agriculture</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>2.0%</b>	<b>4.0%</b>	<b>3.1%</b>	<b>3.4%</b>	<b>3.2%</b>	<b>2.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	1	1	2	2	3	3.1%	2.7%	3.3%	3.1%	2.6%	1.3%
Gas	0	0	0	0	0	0	0	n.s.	2.9%	1.5%	2.9%	2.4%	1.4%
Electricity	0	0	1	1	2	2	3	0.1%	6.1%	2.8%	3.9%	3.7%	3.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	19.7%
<b>Transport</b>	<b>6</b>	<b>12</b>	<b>20</b>	<b>44</b>	<b>73</b>	<b>108</b>	<b>144</b>	<b>6.4%</b>	<b>5.1%</b>	<b>8.2%</b>	<b>5.2%</b>	<b>4.0%</b>	<b>2.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	0.0%	0.0%	0.0%
Oil	6	12	16	41	64	87	105	6.3%	3.2%	9.6%	4.5%	3.2%	1.8%
Gas	0	0	3	2	4	7	11	n.s.	42.7%	-4.9%	6.4%	6.0%	4.7%
Electricity	0	0	0	0	3	7	13	-7.2%	n.s.	n.s.	40.0%	10.7%	6.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	2	7	14	n.s.	n.s.	n.s.	18.2%	10.3%	8.0%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>10</b>	<b>20</b>	<b>36</b>	<b>11.6%</b>	<b>-0.3%</b>	<b>3.8%</b>	<b>9.4%</b>	<b>7.0%</b>	<b>6.0%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Rest South East Asia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	170	202	229	257	281	300	314	1.8%	1.3%	1.1%	0.9%	0.7%	0.4%
GDP per capita (ppp, k\$'05)	2	2	3	4	5	6	8	2.8%	4.1%	3.3%	2.1%	1.9%	2.1%
GDP per capita (mer, k\$'05)	1	1	2	2	3	3	4	3.1%	4.2%	3.4%	2.1%	1.9%	2.1%
Share Value Added - Agriculture (%)	14	9	10	9	8	8	7	-3.8%	1.1%	-1.5%	-0.9%	-0.7%	-0.6%
Share Value Added - Industry (%)	36	39	37	37	37	37	37	0.8%	-0.6%	0.0%	0.1%	0.0%	-0.1%
Share Value Added - Services (%)	50	51	53	54	55	55	56	0.2%	0.2%	0.3%	0.1%	0.1%	0.1%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	21	23	-7.8%	10.3%	-2.2%	1.6%	1.4%	0.9%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	28	24	47	43	47	64	85	-1.2%	6.8%	-0.9%	0.9%	3.1%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	779	897	999	1 226	1 370	1 273	1 151	1.4%	1.1%	2.1%	1.1%	-0.7%	-1.0%
Total GHG (excl. sinks)	779	897	999	1 226	1 370	1 345	1 297	1.4%	1.1%	2.1%	1.1%	-0.2%	-0.4%
Total GHG (energy, industry, agriculture)	565	710	832	1 050	1 205	1 177	1 134	2.3%	1.6%	2.4%	1.4%	-0.2%	-0.4%
CO <sub>2</sub>	378	494	574	698	785	816	803	2.7%	1.5%	2.0%	1.2%	0.4%	-0.2%
CH <sub>4</sub>	141	161	196	269	317	261	230	1.4%	2.0%	3.2%	1.7%	-1.9%	-1.2%
N <sub>2</sub> O	44	43	42	53	60	61	58	-0.1%	-0.3%	2.3%	1.3%	0.1%	-0.6%
F gases	3	12	20	31	43	40	43	15.7%	5.3%	4.7%	3.3%	-0.9%	0.9%
Total GHG from Energy and Industry	444	578	676	870	1 007	983	964	2.7%	1.6%	2.6%	1.5%	-0.2%	-0.2%
CO <sub>2</sub> Emissions from Fuel Comb.	350	470	546	659	734	756	737	3.0%	1.5%	1.9%	1.1%	0.3%	-0.3%
Power generation/District heating	111	202	256	335	376	379	356	6.1%	2.4%	2.7%	1.2%	0.1%	-0.6%
Industry	132	122	144	155	175	183	180	-0.8%	1.7%	0.7%	1.2%	0.5%	-0.1%
Buildings	32	33	34	35	39	40	38	0.5%	0.1%	0.4%	1.1%	0.2%	-0.5%
Agriculture	4	4	2	3	3	4	4	-0.6%	-5.7%	3.1%	1.3%	0.9%	0.0%
Transport	45	73	82	98	105	113	121	5.0%	1.2%	1.7%	0.7%	0.7%	0.7%
Other	26	36	28	33	35	37	38	3.3%	-2.5%	1.7%	0.7%	0.5%	0.2%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	1	10	n.s.	n.s.	n.s.	n.s.	n.s.	34.5%
Coal	0	0	0	0	0	0	9	n.s.	n.s.	n.s.	n.s.	n.s.	38.6%
Gas	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	n.s.	25.3%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	8.4%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	88	91	127	411	494	300	227	0.2%	3.5%	12.5%	1.8%	-4.9%	-2.7%
Coal	32	23	46	289	326	120	39	-3.2%	7.2%	20.2%	1.2%	-9.5%	-10.5%
Oil	9	10	11	7	6	4	3	1.7%	0.5%	-3.7%	-2.3%	-3.6%	-2.6%
Natural gas	9	13	24	31	48	34	23	3.3%	6.4%	2.8%	4.3%	-3.3%	-4.1%
Biomass	23	22	24	50	59	68	67	-0.4%	1.0%	7.7%	1.6%	1.4%	0.0%
Nuclear <sup>1</sup>	9	10	11	11	12	18	20	1.6%	0.8%	-0.2%	1.1%	4.0%	0.9%
Hydro	3	3	3	3	4	4	4	0.2%	1.3%	0.7%	0.5%	0.7%	0.7%
Other renewables	5	10	9	19	39	52	71	7.9%	-1.4%	8.2%	7.3%	2.8%	3.1%
Net Imports	62	111	112	-119	-147	84	180						
Coal	20	37	32	-194	-222	-20	51						
Oil	47	74	72	90	89	89	89						
Natural gas	-5	-1	7	7	10	40	62						
Biomass	0	0	0	-22	-23	-25	-23						
Biofuels	0	0	0	0	-1	-2	-1						
Electricity	0	1	1	1	1	1	1						
Primary Energy Demand <sup>2</sup>	150	202	239	293	347	384	407	3.0%	1.7%	2.0%	1.7%	1.0%	0.6%
Coal	52	60	78	95	104	100	91	1.5%	2.6%	2.0%	0.9%	-0.4%	-1.0%
Oil	56	84	83	97	95	93	92	4.2%	-0.1%	1.6%	-0.2%	-0.2%	-0.1%
Natural gas	4	12	31	38	58	74	84	11.5%	9.7%	2.2%	4.2%	2.6%	1.2%
Biomass	23	22	24	28	36	43	45	-0.4%	1.0%	1.8%	2.3%	1.8%	0.5%
Nuclear <sup>1</sup>	9	10	11	11	12	18	20	1.6%	0.8%	-0.2%	1.1%	4.0%	0.9%
Hydro	3	3	3	3	4	4	4	0.2%	1.3%	0.7%	0.5%	0.7%	0.7%
Other renewables	5	10	9	19	39	52	71	7.9%	-1.4%	8.2%	7.3%	2.8%	3.1%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	150	202	239	293	347	384	407	3.0%	1.7%	2.0%	1.7%	1.0%	0.6%
Energy for Power Generation	48	82	101	133	168	192	213	5.6%	2.1%	2.8%	2.4%	1.3%	1.0%
Other Energy Transformation & Losses	12	16	16	17	22	26	25	3.3%	-0.4%	0.8%	2.6%	1.8%	-0.3%
Final consumption	105	128	158	187	212	234	249	2.0%	2.1%	1.7%	1.3%	1.0%	0.7%
Steel, Non-Met. Minerals and Chem.	14	18	22	26	30	32	32	2.9%	2.3%	1.5%	1.5%	0.5%	-0.1%
Other Industry	29	27	30	35	41	46	49	-0.7%	1.3%	1.3%	1.7%	1.1%	0.7%
Non-Energy Use	6	11	27	36	39	43	44	5.8%	9.4%	2.7%	1.0%	0.8%	0.3%
Residential	27	29	31	34	36	38	39	0.6%	0.6%	1.2%	0.5%	0.4%	0.2%
Services	11	14	17	20	25	30	36	2.6%	2.3%	1.8%	1.9%	2.1%	1.8%
Agriculture	1	1	1	1	2	2	2	-0.2%	-3.1%	3.1%	1.6%	1.5%	1.4%
Road	16	26	26	31	35	40	44	5.0%	0.2%	1.8%	1.2%	1.2%	1.0%
Rail	0	0	1	1	1	1	1	0.1%	11.3%	3.9%	1.0%	0.9%	0.9%
Aviation	1	1	1	1	1	1	1	5.4%	-4.4%	5.9%	2.0%	1.3%	0.4%
Other Transport	1	1	1	1	2	2	2	5.2%	-0.8%	0.7%	1.4%	0.7%	0.4%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest South East Asia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>32</b>	<b>59</b>	<b>78</b>	<b>100</b>	<b>114</b>	<b>118</b>	<b>118</b>	<b>6.5%</b>	<b>2.8%</b>	<b>2.5%</b>	<b>1.3%</b>	<b>0.4%</b>	<b>0.0%</b>
Coal	17	33	45	64	72	71	65	6.7%	3.1%	3.6%	1.3%	-0.2%	-0.9%
Oil	13	16	7	7	6	6	9	2.4%	-7.7%	-0.8%	-1.7%	1.1%	3.5%
Gas	1	9	24	26	30	33	34	22.2%	10.6%	0.9%	1.6%	0.9%	0.1%
Biomass & Waste	0	1	2	2	2	4	6	11.5%	9.2%	0.8%	-0.1%	5.8%	5.4%
Other	0	1	1	2	3	4	5	7.8%	-1.6%	7.4%	6.9%	1.5%	2.0%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>198</b>	<b>329</b>	<b>442</b>	<b>561</b>	<b>673</b>	<b>800</b>	<b>931</b>	<b>5.2%</b>	<b>3.0%</b>	<b>2.4%</b>	<b>1.8%</b>	<b>1.7%</b>	<b>1.5%</b>
Coal	69	135	185	262	292	287	265	6.9%	3.2%	3.5%	1.1%	-0.2%	-0.8%
of which CCS	0	0	0	0	0	0	12	n.s.	n.s.	n.s.	n.s.	n.s.	41.7%
Oil	54	68	30	28	24	27	38	2.3%	-7.9%	-0.5%	-1.7%	1.1%	3.5%
Gas	3	41	132	143	167	185	187	28.2%	12.5%	0.8%	1.6%	1.0%	0.1%
of which CCS	0	0	0	0	0	0	4	n.s.	n.s.	n.s.	n.s.	n.s.	25.9%
Biomass & Waste	1	2	5	5	6	14	28	13.8%	8.6%	0.2%	2.2%	8.6%	6.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	33	39	42	41	46	71	79	1.6%	0.8%	-0.2%	1.2%	4.3%	1.1%
Hydro	32	32	37	39	42	45	48	0.2%	1.3%	0.7%	0.5%	0.7%	0.7%
Wind	0	0	1	15	39	78	130	n.s.	n.s.	29.5%	9.8%	7.2%	5.3%
Solar	0	0	0	6	18	48	97	n.s.	n.s.	34.5%	11.8%	10.4%	7.4%
Other	5	12	10	20	40	46	58	7.8%	-1.6%	7.4%	6.9%	1.6%	2.3%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>50</b>	<b>79</b>	<b>104</b>	<b>133</b>	<b>168</b>	<b>207</b>	<b>247</b>	<b>4.7%</b>	<b>2.8%</b>	<b>2.5%</b>	<b>2.4%</b>	<b>2.1%</b>	<b>1.8%</b>
Coal	17	29	35	46	56	56	44	5.5%	1.8%	2.8%	2.2%	0.0%	-2.4%
of which CCS	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	n.s.	41.9%
Oil	15	20	13	15	15	11	11	2.7%	-4.4%	1.7%	-0.2%	-2.8%	-0.4%
Gas	2	10	30	35	38	40	34	20.2%	12.0%	1.6%	0.6%	0.5%	-1.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	26.0%
Biomass & Waste	0	1	1	1	1	2	4	23.2%	4.2%	-2.8%	1.4%	8.6%	6.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	5	5	5	5	6	9	10	0.0%	0.2%	0.1%	1.2%	4.3%	1.1%
Hydro	10	13	18	18	19	20	21	2.3%	3.4%	-0.1%	0.5%	0.7%	0.7%
Wind	0	0	1	6	16	32	53	n.s.	n.s.	29.0%	9.6%	7.1%	5.1%
Solar	0	0	0	4	12	31	63	n.s.	n.s.	34.4%	11.7%	10.4%	7.3%
Other	1	2	2	3	6	6	8	8.1%	0.2%	4.3%	6.8%	0.7%	2.2%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>105</b>	<b>128</b>	<b>158</b>	<b>187</b>	<b>212</b>	<b>234</b>	<b>249</b>	<b>2.0%</b>	<b>2.1%</b>	<b>1.7%</b>	<b>1.3%</b>	<b>1.0%</b>	<b>0.7%</b>
Coal	30	23	28	24	25	23	21	-2.7%	1.9%	-1.4%	0.3%	-0.7%	-1.1%
Oil	36	56	68	82	82	79	76	4.5%	1.9%	1.9%	-0.1%	-0.3%	-0.4%
Gas	1	3	5	12	26	38	47	5.5%	7.0%	9.0%	8.0%	4.2%	2.0%
Electricity	14	25	34	43	52	62	72	5.6%	3.3%	2.4%	1.8%	1.7%	1.6%
Heat	1	1	1	1	1	3	4	-2.9%	4.0%	1.3%	2.9%	7.3%	4.2%
Biomass & Other	22	21	22	25	27	29	30	-0.7%	0.5%	1.3%	0.9%	0.6%	0.4%
Share of Renewables <sup>3</sup> (%)	24%	19%	18%	20%	22%	26%	31%	-2.1%	-0.5%	0.6%	1.1%	1.6%	1.8%
<b>Industry (incl. non-energy use)</b>	<b>49</b>	<b>56</b>	<b>80</b>	<b>96</b>	<b>111</b>	<b>120</b>	<b>124</b>	<b>1.4%</b>	<b>3.7%</b>	<b>1.9%</b>	<b>1.4%</b>	<b>0.8%</b>	<b>0.4%</b>
Coal	26	19	24	22	22	21	19	-2.9%	2.2%	-1.0%	0.4%	-0.6%	-0.8%
Oil	14	23	35	43	41	36	32	4.7%	4.5%	2.0%	-0.5%	-1.1%	-1.4%
Gas	1	1	3	8	19	29	36	6.5%	10.5%	11.1%	8.3%	4.6%	2.0%
Electricity	7	11	15	20	25	29	32	4.5%	3.5%	2.9%	2.1%	1.3%	1.0%
Heat	0	0	0	0	0	0	0	-3.6%	0.7%	0.3%	-0.2%	-0.3%	-0.2%
Biomass & Other	1	2	2	3	3	4	6	7.7%	2.8%	1.8%	1.5%	2.4%	2.7%
<b>Buildings</b>	<b>38</b>	<b>43</b>	<b>48</b>	<b>55</b>	<b>61</b>	<b>68</b>	<b>75</b>	<b>1.2%</b>	<b>1.2%</b>	<b>1.4%</b>	<b>1.1%</b>	<b>1.1%</b>	<b>0.9%</b>
Coal	5	4	4	3	2	2	1	-1.6%	0.1%	-4.2%	-0.3%	-1.4%	-3.9%
Oil	4	5	4	6	5	4	3	2.4%	-0.5%	2.2%	-1.7%	-1.9%	-1.7%
Gas	1	1	2	3	6	8	9	4.9%	2.5%	5.7%	7.0%	2.8%	1.3%
Electricity	7	13	18	22	25	31	37	6.8%	3.0%	2.0%	1.4%	2.0%	1.9%
Heat	1	0	1	1	1	3	4	-2.5%	5.3%	1.6%	3.6%	8.3%	4.5%
Biomass & Other	21	19	19	21	21	21	20	-1.2%	0.1%	1.0%	0.2%	-0.2%	-0.4%
<b>Agriculture</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>-0.2%</b>	<b>-3.1%</b>	<b>3.1%</b>	<b>1.6%</b>	<b>1.5%</b>	<b>1.4%</b>
Coal	0	0	0	0	0	0	0	-32.8%	12.8%	-2.2%	0.0%	-0.4%	-1.5%
Oil	1	1	1	1	1	1	1	0.0%	-5.7%	3.1%	1.3%	0.9%	0.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	1	1	1	1.5%	4.7%	3.2%	2.3%	2.2%	2.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	4.3%	5.4%	0.2%	0.0%	10.1%	14.2%
<b>Transport</b>	<b>17</b>	<b>28</b>	<b>28</b>	<b>34</b>	<b>39</b>	<b>44</b>	<b>48</b>	<b>5.0%</b>	<b>0.1%</b>	<b>1.9%</b>	<b>1.2%</b>	<b>1.2%</b>	<b>1.0%</b>
Coal	0	0	0	0	0	0	0	-4.4%	-3.7%	-14.1%	0.0%	0.0%	0.0%
Oil	17	28	28	33	35	38	40	5.0%	-0.1%	1.8%	0.7%	0.6%	0.6%
Gas	0	0	0	0	1	1	2	n.s.	n.s.	-1.2%	12.1%	6.2%	5.8%
Electricity	0	0	0	0	1	2	2	4.5%	15.0%	3.9%	6.7%	5.7%	4.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	2	4	4	n.s.	n.s.	14.3%	11.1%	4.9%	1.6%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>12</b>	<b>16</b>	<b>16</b>	<b>17</b>	<b>22</b>	<b>26</b>	<b>25</b>	<b>3.3%</b>	<b>-0.4%</b>	<b>0.8%</b>	<b>2.6%</b>	<b>1.8%</b>	<b>-0.3%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

<b>Australia</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	17	19	22	26	28	31	33	1.1%	1.5%	1.5%	1.1%	0.9%	0.8%
GDP per capita (ppp, k\$'05)	24	30	34	39	46	53	61	2.2%	1.5%	1.3%	1.6%	1.5%	1.3%
GDP per capita (mer, k\$'05)	25	31	36	41	48	56	64	2.2%	1.5%	1.3%	1.6%	1.5%	1.3%
Share Value Added - Agriculture (%)	5	4	2	2	2	2	2	-1.8%	-6.8%	-0.1%	-0.6%	-0.4%	-0.3%
Share Value Added - Industry (%)	31	27	27	27	25	23	22	-1.4%	0.1%	0.0%	-0.7%	-0.7%	-0.7%
Share Value Added - Services (%)	64	69	71	71	73	75	77	0.8%	0.3%	0.0%	0.3%	0.2%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	21	23	-7.8%	10.3%	-2.2%	1.6%	1.4%	0.9%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	28	24	47	43	47	64	85	-1.2%	6.8%	-0.9%	0.9%	3.1%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
<b>Total GHG</b>	<b>513</b>	<b>543</b>	<b>567</b>	<b>518</b>	<b>424</b>	<b>290</b>	<b>218</b>	<b>0.6%</b>	<b>0.4%</b>	<b>-0.9%</b>	<b>-2.0%</b>	<b>-3.7%</b>	<b>-2.8%</b>
<b>Total GHG (excl. sinks)</b>	<b>551</b>	<b>557</b>	<b>590</b>	<b>525</b>	<b>501</b>	<b>488</b>	<b>456</b>	<b>0.1%</b>	<b>0.6%</b>	<b>-1.2%</b>	<b>-0.5%</b>	<b>-0.2%</b>	<b>-0.7%</b>
<b>Total GHG (energy, industry, agriculture)</b>	<b>419</b>	<b>491</b>	<b>546</b>	<b>508</b>	<b>484</b>	<b>462</b>	<b>399</b>	<b>1.6%</b>	<b>1.1%</b>	<b>-0.7%</b>	<b>-0.5%</b>	<b>-0.5%</b>	<b>-1.5%</b>
CO <sub>2</sub>	276	351	403	382	372	351	294	2.4%	1.4%	-0.5%	-0.3%	-0.6%	-1.7%
CH <sub>4</sub>	110	107	102	88	78	76	71	-0.3%	-0.4%	-1.5%	-1.2%	-0.2%	-0.7%
N <sub>2</sub> O	28	31	33	30	28	27	25	1.1%	0.5%	-1.0%	-0.9%	-0.4%	-0.7%
F gases	5	3	7	9	7	8	9	-6.6%	10.6%	1.8%	-2.4%	1.6%	1.1%
<b>Total GHG from Energy and Industry</b>	<b>339</b>	<b>410</b>	<b>473</b>	<b>438</b>	<b>416</b>	<b>393</b>	<b>334</b>	<b>1.9%</b>	<b>1.4%</b>	<b>-0.8%</b>	<b>-0.5%</b>	<b>-0.6%</b>	<b>-1.6%</b>
<b>CO<sub>2</sub> Emissions from Fuel Comb.</b>	<b>261</b>	<b>334</b>	<b>384</b>	<b>363</b>	<b>352</b>	<b>330</b>	<b>274</b>	<b>2.5%</b>	<b>1.4%</b>	<b>-0.6%</b>	<b>-0.3%</b>	<b>-0.6%</b>	<b>-1.8%</b>
Power generation/District heating	138	186	208	159	151	130	94	3.0%	1.1%	-2.6%	-0.5%	-1.5%	-3.2%
Industry	38	44	43	52	50	52	50	1.4%	-0.2%	1.8%	-0.3%	0.5%	-0.5%
Buildings	9	11	13	13	14	15	14	2.1%	1.6%	0.6%	0.7%	0.6%	-1.2%
Agriculture	3	4	6	7	7	6	4	2.2%	3.9%	0.9%	-0.5%	-1.5%	-3.2%
Transport	58	70	83	93	85	79	70	1.9%	1.6%	1.2%	-0.9%	-0.8%	-1.2%
Other	14	19	32	39	45	48	43	2.7%	5.5%	2.1%	1.4%	0.6%	-1.0%
<b>CO<sub>2</sub> captured (CCS)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>22</b>	<b>68</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>46.4%</b>	<b>27.2%</b>	<b>12.1%</b>
Coal	0	0	0	0	1	15	44	n.s.	n.s.	n.s.	43.6%	26.3%	11.6%
Gas	0	0	0	0	0	7	17	n.s.	n.s.	n.s.	n.s.	30.2%	9.6%
Biomass	0	0	0	0	0	0	7	n.s.	n.s.	n.s.	23.4%	11.1%	50.5%
<b>Energy Balance, by fuel (Mtoe)</b>													
<b>Primary Production</b>	<b>191</b>	<b>249</b>	<b>319</b>	<b>378</b>	<b>471</b>	<b>476</b>	<b>464</b>	<b>2.7%</b>	<b>2.5%</b>	<b>1.7%</b>	<b>2.2%</b>	<b>0.1%</b>	<b>-0.3%</b>
Coal	137	176	248	275	304	283	249	2.6%	3.4%	1.0%	1.0%	-0.7%	-1.3%
Oil	32	40	28	23	36	38	35	2.3%	-3.7%	-2.0%	4.7%	0.4%	-0.8%
Natural gas	17	26	38	63	101	118	132	4.1%	4.0%	5.2%	4.8%	1.5%	1.2%
Biomass	4	5	4	13	23	26	31	2.4%	-1.4%	11.3%	5.9%	1.3%	1.7%
Nuclear <sup>1</sup>	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	24.3%	11.5%	7.3%
Hydro	1	1	1	1	1	1	1	1.2%	-2.1%	1.4%	0.5%	0.2%	0.2%
Other renewables	0	0	1	4	6	9	13	0.9%	21.5%	20.0%	4.4%	4.6%	2.9%
<b>Net Imports</b>	<b>- 100</b>	<b>- 140</b>	<b>- 196</b>	<b>- 246</b>	<b>- 331</b>	<b>- 326</b>	<b>- 305</b>						
Coal	- 98	- 127	- 197	- 239	- 276	- 257	- 222						
Oil	1	- 6	13	26	8	1	- 4						
Natural gas	- 3	- 6	- 12	- 28	- 53	- 60	- 71						
Biomass	0	0	0	- 5	- 10	- 9	- 6						
Biofuels	0	0	0	0	0	- 1	- 1						
Electricity	0	0	0	0	0	0	0						
<b>Primary Energy Demand<sup>2</sup></b>	<b>91</b>	<b>109</b>	<b>124</b>	<b>133</b>	<b>141</b>	<b>150</b>	<b>159</b>	<b>1.8%</b>	<b>1.2%</b>	<b>0.7%</b>	<b>0.6%</b>	<b>0.7%</b>	<b>0.5%</b>
Coal	39	49	51	36	28	26	27	2.4%	0.3%	-3.4%	-2.3%	-0.9%	0.4%
Oil	33	34	40	49	44	38	30	0.5%	1.6%	2.0%	-1.2%	-1.3%	-2.3%
Natural gas	14	19	26	35	48	57	61	3.0%	3.1%	2.9%	3.3%	1.8%	0.6%
Biomass	4	5	4	8	13	17	24	2.4%	-1.4%	5.9%	5.2%	3.0%	3.5%
Nuclear <sup>1</sup>	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	24.3%	11.5%	7.3%
Hydro	1	1	1	1	1	1	1	1.2%	-2.1%	1.4%	0.5%	0.2%	0.2%
Other renewables	0	0	1	4	6	9	13	0.9%	21.5%	20.0%	4.4%	4.6%	2.9%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
<b>Primary Energy Demand</b>	<b>91</b>	<b>109</b>	<b>124</b>	<b>133</b>	<b>141</b>	<b>150</b>	<b>159</b>	<b>1.8%</b>	<b>1.2%</b>	<b>0.7%</b>	<b>0.6%</b>	<b>0.7%</b>	<b>0.5%</b>
<b>Energy for Power Generation</b>	<b>38</b>	<b>51</b>	<b>59</b>	<b>52</b>	<b>58</b>	<b>64</b>	<b>72</b>	<b>2.8%</b>	<b>1.5%</b>	<b>-1.1%</b>	<b>1.0%</b>	<b>1.0%</b>	<b>1.2%</b>
<b>Other Energy Transformation &amp; Losses</b>	<b>6</b>	<b>3</b>	<b>6</b>	<b>12</b>	<b>16</b>	<b>19</b>	<b>23</b>	<b>-6.9%</b>	<b>7.4%</b>	<b>6.8%</b>	<b>3.0%</b>	<b>1.9%</b>	<b>1.6%</b>
<b>Final consumption</b>	<b>58</b>	<b>71</b>	<b>77</b>	<b>88</b>	<b>91</b>	<b>97</b>	<b>101</b>	<b>2.0%</b>	<b>0.9%</b>	<b>1.3%</b>	<b>0.4%</b>	<b>0.7%</b>	<b>0.4%</b>
Steel, Non-Met. Minerals and Chem.	7	8	8	8	7	7	6	0.4%	0.5%	0.3%	-0.9%	-0.6%	-0.9%
Other Industry	13	17	16	20	21	24	25	2.8%	-0.8%	2.2%	0.7%	1.0%	0.5%
Non-Energy Use	4	4	5	6	6	6	6	1.2%	1.0%	1.7%	-0.2%	0.4%	0.0%
Residential	7	9	10	11	11	13	13	1.9%	1.3%	0.4%	0.7%	1.0%	0.6%
Services	3	5	7	8	10	12	14	3.8%	3.4%	1.3%	2.1%	2.0%	1.5%
Agriculture	1	2	2	2	3	3	3	2.1%	3.2%	1.1%	1.0%	0.9%	0.7%
Road	19	22	25	27	26	27	26	1.8%	1.0%	1.0%	-0.4%	0.1%	0.0%
Rail	1	1	1	1	1	1	1	0.9%	4.2%	1.0%	0.3%	0.2%	0.1%
Aviation	1	2	2	4	4	4	4	5.9%	1.8%	5.1%	1.4%	0.4%	0.1%
Other Transport	1	0	1	1	1	1	1	-3.9%	6.7%	-1.1%	1.2%	0.4%	-0.2%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

<b>Australia</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>37</b>	<b>49</b>	<b>57</b>	<b>47</b>	<b>50</b>	<b>52</b>	<b>55</b>	<b>2.9%</b>	<b>1.5%</b>	<b>-1.9%</b>	<b>0.5%</b>	<b>0.4%</b>	<b>0.6%</b>
Coal	32	44	46	30	24	22	21	3.3%	0.5%	-4.1%	-2.2%	-1.0%	-0.4%
Oil	1	1	1	2	2	2	2	-5.7%	4.5%	7.6%	3.0%	-2.3%	0.3%
Gas	3	4	9	14	21	24	26	1.6%	8.6%	4.0%	4.2%	1.6%	0.5%
Biomass & Waste	1	1	1	1	2	3	6	-0.2%	0.5%	5.3%	6.4%	3.8%	6.6%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>155</b>	<b>210</b>	<b>251</b>	<b>254</b>	<b>302</b>	<b>367</b>	<b>435</b>	<b>3.1%</b>	<b>1.8%</b>	<b>0.1%</b>	<b>1.7%</b>	<b>2.0%</b>	<b>1.7%</b>
Coal	121	174	181	124	102	95	95	3.7%	0.4%	-3.7%	-1.9%	-0.7%	0.0%
of which CCS	0	0	0	0	2	19	46	n.s.	n.s.	n.s.	n.s.	27.3%	9.6%
Oil	4	2	4	7	9	8	8	-6.7%	9.3%	4.6%	2.9%	-1.9%	0.6%
Gas	14	16	45	64	102	129	142	1.2%	10.8%	3.5%	4.8%	2.4%	1.0%
of which CCS	0	0	0	0	1	19	48	n.s.	n.s.	n.s.	n.s.	32.3%	9.8%
Biomass & Waste	1	1	3	4	9	15	30	4.2%	9.4%	4.6%	7.8%	4.8%	7.5%
of which CCS	0	0	0	0	0	0	8	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	2	6	12	n.s.	n.s.	n.s.	24.6%	11.6%	7.3%
Hydro	15	17	14	16	16	17	17	1.2%	-2.1%	1.4%	0.5%	0.2%	0.2%
Wind	0	0	4	27	40	66	89	n.s.	53.1%	20.6%	4.1%	5.2%	3.0%
Solar	0	0	0	13	22	31	41	14.9%	25.3%	42.7%	5.5%	3.8%	2.6%
Other	0	0	0	0	0	0	1	n.s.	n.s.	7.2%	41.2%	18.9%	14.6%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>38</b>	<b>46</b>	<b>60</b>	<b>77</b>	<b>88</b>	<b>108</b>	<b>124</b>	<b>1.9%</b>	<b>2.6%</b>	<b>2.6%</b>	<b>1.4%</b>	<b>2.1%</b>	<b>1.3%</b>
Coal	24	27	30	26	21	19	14	0.9%	1.2%	-1.3%	-2.2%	-1.3%	-2.6%
of which CCS	0	0	0	0	0	2	6	n.s.	n.s.	n.s.	n.s.	27.5%	9.7%
Oil	2	4	2	2	2	1	1	9.3%	-5.9%	0.4%	0.2%	-5.1%	-0.3%
Gas	4	6	16	18	21	25	27	4.6%	10.5%	0.8%	1.5%	2.1%	0.8%
of which CCS	0	0	0	0	0	2	6	n.s.	n.s.	n.s.	n.s.	32.5%	10.0%
Biomass & Waste	0	0	1	1	1	2	4	4.5%	4.0%	1.7%	7.4%	4.7%	7.2%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	24.3%	11.4%	7.1%
Hydro	8	9	9	9	10	10	10	1.0%	-0.5%	0.7%	0.5%	0.2%	0.2%
Wind	0	0	2	11	17	28	36	n.s.	49.7%	19.9%	4.0%	5.0%	2.7%
Solar	0	0	0	9	16	23	28	13.6%	24.8%	44.9%	5.5%	3.6%	2.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	18.3%	14.1%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>58</b>	<b>71</b>	<b>77</b>	<b>88</b>	<b>91</b>	<b>97</b>	<b>101</b>	<b>2.0%</b>	<b>0.9%</b>	<b>1.3%</b>	<b>0.4%</b>	<b>0.7%</b>	<b>0.4%</b>
Coal	6	5	4	5	4	4	4	-0.4%	-2.1%	1.1%	-2.2%	0.0%	-0.3%
Oil	29	35	39	45	39	35	29	1.8%	1.1%	1.5%	-1.3%	-1.2%	-2.0%
Gas	9	11	12	14	17	20	21	2.5%	1.0%	0.8%	2.1%	1.8%	0.7%
Electricity	11	15	18	19	22	27	32	2.9%	1.9%	0.4%	1.8%	2.0%	1.8%
Heat	0	0	0	0	1	1	1	0.0%	11.5%	7.3%	3.2%	3.7%	3.8%
Biomass & Other	3	4	3	6	8	10	13	2.9%	-2.3%	5.0%	3.9%	2.3%	2.5%
Share of Renewables <sup>3</sup> (%)	8%	8%	7%	13%	20%	27%	36%	0.2%	-1.8%	6.4%	4.3%	3.1%	2.9%
<b>Industry (incl. non-energy use)</b>	<b>24</b>	<b>29</b>	<b>29</b>	<b>34</b>	<b>35</b>	<b>37</b>	<b>37</b>	<b>1.9%</b>	<b>-0.2%</b>	<b>1.6%</b>	<b>0.2%</b>	<b>0.6%</b>	<b>0.2%</b>
Coal	5	5	4	5	4	4	4	-0.2%	-2.1%	1.1%	-2.2%	0.0%	-0.3%
Oil	6	8	8	10	8	7	6	1.8%	0.2%	2.5%	-2.2%	-1.6%	-2.0%
Gas	6	8	8	9	11	13	13	2.1%	0.9%	1.0%	2.0%	1.7%	0.1%
Electricity	5	7	7	7	8	9	10	2.7%	0.4%	0.0%	1.3%	1.4%	1.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	2	2	3	4	4	5	5.2%	-3.3%	5.9%	2.0%	0.6%	1.9%
<b>Buildings</b>	<b>11</b>	<b>14</b>	<b>17</b>	<b>19</b>	<b>21</b>	<b>25</b>	<b>27</b>	<b>2.5%</b>	<b>2.1%</b>	<b>0.8%</b>	<b>1.3%</b>	<b>1.4%</b>	<b>1.0%</b>
Coal	0	0	0	0	0	0	0	-10.4%	-3.9%	-4.5%	-7.0%	-9.8%	n.s.
Oil	1	1	1	1	1	2	1	0.4%	3.2%	2.9%	1.8%	1.3%	-1.2%
Gas	3	4	4	4	4	4	4	3.1%	1.3%	-0.1%	0.2%	0.3%	-1.1%
Electricity	6	8	11	11	12	14	16	3.2%	3.1%	0.4%	1.0%	1.5%	1.5%
Heat	0	0	0	0	1	1	1	0.0%	11.5%	7.3%	3.2%	3.7%	3.8%
Biomass & Other	2	2	1	2	3	4	4	0.6%	-2.9%	2.8%	4.2%	2.4%	1.6%
<b>Agriculture</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>2.1%</b>	<b>3.2%</b>	<b>1.1%</b>	<b>1.0%</b>	<b>0.9%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	2	2	2	2	1	2.2%	3.9%	0.9%	-0.5%	-1.5%	-3.2%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	5.4%	-0.2%	-1.0%	-2.2%
Electricity	0	0	0	0	0	0	1	2.0%	-2.0%	0.6%	3.5%	3.6%	3.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	22.3%	8.3%	5.6%
<b>Transport</b>	<b>21</b>	<b>25</b>	<b>29</b>	<b>33</b>	<b>33</b>	<b>33</b>	<b>33</b>	<b>1.9%</b>	<b>1.3%</b>	<b>1.4%</b>	<b>-0.1%</b>	<b>0.1%</b>	<b>0.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	21	25	28	32	28	25	20	1.8%	1.1%	1.2%	-1.2%	-1.2%	-1.9%
Gas	0	0	0	0	1	3	4	24.9%	-1.0%	13.4%	16.7%	6.5%	5.3%
Electricity	0	0	0	1	2	4	5	2.6%	5.4%	4.2%	14.3%	6.5%	4.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	1	2	3	n.s.	n.s.	7.4%	8.4%	4.6%	3.7%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>6</b>	<b>3</b>	<b>6</b>	<b>12</b>	<b>16</b>	<b>19</b>	<b>23</b>	<b>-6.9%</b>	<b>7.4%</b>	<b>6.8%</b>	<b>3.0%</b>	<b>1.9%</b>	<b>1.6%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Japan	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	122	126	127	125	120	114	107	0.3%	0.1%	-0.2%	-0.4%	-0.5%	-0.6%
GDP per capita (ppp, k\$'05)	27	29	31	33	38	44	51	0.8%	0.6%	0.7%	1.3%	1.5%	1.5%
GDP per capita (mer, k\$'05)	32	34	37	39	45	52	60	0.8%	0.6%	0.7%	1.3%	1.5%	1.5%
Share Value Added - Agriculture (%)	2	2	1	1	1	1	1	-3.3%	-2.4%	-0.5%	-0.7%	-0.6%	-0.6%
Share Value Added - Industry (%)	38	31	27	26	26	26	27	-1.9%	-1.2%	-0.5%	0.0%	0.0%	0.0%
Share Value Added - Services (%)	60	67	71	73	73	73	73	1.1%	0.6%	0.2%	0.0%	0.0%	0.0%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	21	23	-7.8%	10.3%	-2.2%	1.6%	1.4%	0.9%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	28	24	47	43	47	64	85	-1.2%	6.8%	-0.9%	0.9%	3.1%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	1 093	1 177	1 102	970	944	733	541	0.7%	-0.7%	-1.3%	-0.3%	-2.5%	-3.0%
Total GHG (excl. sinks)	1 168	1 266	1 177	1 010	945	739	550	0.8%	-0.7%	-1.5%	-0.7%	-2.4%	-2.9%
Total GHG (energy, industry, agriculture)	1 160	1 262	1 174	1 009	933	703	525	0.8%	-0.7%	-1.5%	-0.8%	-2.8%	-2.9%
CO <sub>2</sub>	1 072	1 184	1 124	959	890	670	494	1.0%	-0.5%	-1.6%	-0.7%	-2.8%	-3.0%
CH <sub>4</sub>	32	26	21	20	19	15	14	-2.2%	-2.3%	-0.3%	-0.7%	-1.9%	-1.1%
N <sub>2</sub> O	30	28	21	19	17	12	10	-0.8%	-2.8%	-0.9%	-1.1%	-3.5%	-1.4%
F gases	26	25	9	11	7	6	7	-0.2%	-10.2%	2.5%	-4.1%	-1.6%	0.7%
Total GHG from Energy and Industry	1 131	1 237	1 150	984	909	683	506	0.9%	-0.7%	-1.5%	-0.8%	-2.8%	-3.0%
CO <sub>2</sub> Emissions from Fuel Comb.	986	1 099	1 057	895	829	616	445	1.1%	-0.4%	-1.7%	-0.8%	-2.9%	-3.2%
Power generation/District heating	337	386	433	362	361	239	151	1.4%	1.1%	-1.8%	0.0%	-4.1%	-4.5%
Industry	225	214	186	166	159	138	119	-0.5%	-1.4%	-1.1%	-0.5%	-1.4%	-1.4%
Buildings	143	177	156	120	99	78	59	2.1%	-1.3%	-2.6%	-1.9%	-2.4%	-2.6%
Agriculture	21	16	10	10	10	9	6	-2.6%	-4.3%	-0.2%	0.1%	-2.0%	-3.9%
Transport	213	259	229	202	168	132	96	2.0%	-1.3%	-1.2%	-1.8%	-2.4%	-3.2%
Other	47	46	43	34	31	22	15	-0.1%	-0.5%	-2.5%	-1.0%	-3.2%	-3.9%
CO <sub>2</sub> captured (CCS)	0	0	0	0	1	40	120	n.s.	n.s.	n.s.	n.s.	50.7%	11.6%
Coal	0	0	0	0	1	39	115	n.s.	n.s.	n.s.	n.s.	52.0%	11.3%
Gas	0	0	0	0	0	1	4	n.s.	n.s.	n.s.	n.s.	35.5%	19.9%
Biomass	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	36.3%	8.2%	32.8%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	76	107	101	100	118	146	166	3.5%	-0.7%	0.0%	1.6%	2.2%	1.3%
Coal	5	2	0	0	0	0	0	-9.4%	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	1	1	1	1	0	1.2%	-0.1%	0.8%	-0.5%	-2.0%	-3.4%
Natural gas	2	2	3	2	1	1	1	1.6%	3.0%	-2.9%	-3.6%	-4.3%	-5.7%
Biomass	5	6	10	12	18	22	23	1.6%	5.5%	2.0%	4.5%	1.6%	0.8%
Nuclear <sup>1</sup>	54	85	76	63	64	75	83	4.8%	-1.1%	-1.8%	0.2%	1.6%	1.0%
Hydro	8	8	8	8	9	9	9	0.1%	-0.7%	0.3%	0.8%	0.2%	0.1%
Other renewables	3	4	3	14	24	39	49	3.4%	-0.8%	15.2%	5.5%	4.8%	2.4%
Net Imports	369	418	404	345	327	274	244						
Coal	77	100	119	119	126	97	86						
Oil	244	254	202	155	125	97	75						
Natural gas	47	64	83	68	66	61	58						
Biomass	0	0	0	4	9	18	23						
Biofuels	0	0	0	0	1	1	2						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	446	525	505	445	444	420	410	1.7%	-0.4%	-1.2%	0.0%	-0.6%	-0.3%
Coal	82	102	119	119	126	97	86	2.2%	1.6%	0.0%	0.6%	-2.5%	-1.3%
Oil	245	255	202	156	126	97	76	0.4%	-2.3%	-2.6%	-2.1%	-2.6%	-2.5%
Natural gas	49	66	86	70	67	62	59	2.9%	2.7%	-2.1%	-0.4%	-0.8%	-0.5%
Biomass	5	6	10	16	28	39	46	1.6%	5.5%	4.9%	5.9%	3.5%	1.7%
Nuclear <sup>1</sup>	54	85	76	63	64	75	83	4.8%	-1.1%	-1.8%	0.2%	1.6%	1.0%
Hydro	8	8	8	8	9	9	9	0.1%	-0.7%	0.3%	0.8%	0.2%	0.1%
Other renewables	3	4	3	14	24	39	49	3.4%	-0.8%	15.2%	5.5%	4.8%	2.4%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	446	525	505	445	444	420	410	1.7%	-0.4%	-1.2%	0.0%	-0.6%	-0.3%
Energy for Power Generation	176	223	230	204	217	220	237	2.4%	0.3%	-1.2%	0.6%	0.1%	0.8%
Other Energy Transformation & Losses	20	23	20	14	14	13	13	1.5%	-1.8%	-3.3%	-0.2%	-0.4%	-0.4%
Final consumption	316	362	342	309	305	288	271	1.4%	-0.6%	-1.0%	-0.1%	-0.6%	-0.6%
Steel, Non-Met. Minerals and Chem.	62	62	60	57	59	50	40	0.0%	-0.3%	-0.5%	0.4%	-1.8%	-2.2%
Other Industry	52	51	42	35	36	36	38	-0.2%	-1.8%	-1.9%	0.2%	0.2%	0.4%
Non-Energy Use	39	46	45	41	41	41	41	1.5%	-0.3%	-0.8%	-0.2%	0.1%	0.1%
Residential	38	49	50	41	39	38	37	2.5%	0.2%	-2.0%	-0.4%	-0.2%	-0.3%
Services	45	62	64	61	64	65	66	3.1%	0.3%	-0.3%	0.5%	0.2%	0.2%
Agriculture	7	5	3	3	3	4	4	-2.6%	-4.4%	-0.2%	0.3%	0.3%	0.3%
Road	63	78	69	61	53	45	36	2.1%	-1.2%	-1.2%	-1.4%	-1.7%	-2.4%
Rail	2	2	2	2	2	2	2	0.4%	-0.1%	-0.4%	0.6%	0.6%	0.6%
Aviation	3	4	4	4	4	4	5	2.1%	1.1%	-0.7%	0.5%	0.3%	0.4%
Other Transport	4	5	3	3	3	3	2	0.9%	-3.3%	-0.9%	-0.2%	-1.0%	-1.3%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Japan	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>111</b>	<b>125</b>	<b>143</b>	<b>119</b>	<b>119</b>	<b>97</b>	<b>95</b>	<b>1.2%</b>	<b>1.3%</b>	<b>-1.9%</b>	<b>0.1%</b>	<b>-2.1%</b>	<b>-0.1%</b>
Coal	25	47	61	63	68	52	48	6.8%	2.6%	0.3%	0.7%	-2.7%	-0.7%
Oil	51	28	18	4	2	1	5	-5.9%	-4.1%	-14.0%	-5.2%	-6.5%	15.6%
Gas	33	47	56	42	36	28	24	3.5%	1.9%	-2.9%	-1.6%	-2.5%	-1.6%
Biomass & Waste	2	3	7	9	12	15	17	2.9%	8.6%	2.3%	3.5%	1.9%	1.6%
Other	0	0	0	1	1	1	1	6.8%	-2.4%	10.9%	4.1%	0.0%	2.2%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>842</b>	<b>1 059</b>	<b>1 118</b>	<b>1 029</b>	<b>1 131</b>	<b>1 215</b>	<b>1 305</b>	<b>2.3%</b>	<b>0.5%</b>	<b>-0.8%</b>	<b>0.9%</b>	<b>0.7%</b>	<b>0.7%</b>
Coal	116	229	299	314	345	262	238	7.0%	2.7%	0.5%	0.9%	-2.7%	-1.0%
of which CCS	0	0	0	0	0	47	145	n.s.	n.s.	n.s.	n.s.	n.s.	11.9%
Oil	237	135	92	17	10	5	22	-5.4%	-3.8%	-15.4%	-5.2%	-6.6%	15.5%
Gas	179	256	301	224	193	150	120	3.7%	1.6%	-2.9%	-1.5%	-2.5%	-2.2%
of which CCS	0	0	0	0	0	2	11	n.s.	n.s.	n.s.	n.s.	52.4%	20.8%
Biomass & Waste	11	16	36	43	58	68	79	3.7%	8.8%	1.6%	3.1%	1.7%	1.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	202	322	288	247	251	300	335	4.8%	-1.1%	-1.5%	0.2%	1.8%	1.1%
Hydro	96	97	91	94	101	103	104	0.1%	-0.7%	0.3%	0.8%	0.2%	0.1%
Wind	0	0	5	40	97	197	263	n.s.	46.9%	22.9%	9.2%	7.4%	2.9%
Solar	0	0	4	43	64	115	122	41.7%	27.0%	27.6%	4.0%	6.0%	0.6%
Other	2	3	3	7	12	14	23	6.8%	-2.4%	10.9%	4.5%	1.9%	5.0%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>227</b>	<b>261</b>	<b>286</b>	<b>332</b>	<b>372</b>	<b>435</b>	<b>431</b>	<b>1.4%</b>	<b>0.9%</b>	<b>1.5%</b>	<b>1.2%</b>	<b>1.6%</b>	<b>-0.1%</b>
Coal	31	63	63	74	78	63	35	7.4%	0.1%	1.6%	0.5%	-2.1%	-5.8%
of which CCS	0	0	0	0	0	6	20	n.s.	n.s.	n.s.	n.s.	n.s.	12.4%
Oil	78	66	56	48	39	34	32	-1.6%	-1.6%	-1.6%	-1.9%	-1.4%	-0.5%
Gas	47	37	55	54	51	41	31	-2.3%	4.1%	-0.3%	-0.6%	-2.1%	-2.9%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	52.5%	21.0%
Biomass & Waste	3	3	8	7	10	11	12	1.8%	9.6%	-0.3%	3.0%	1.4%	0.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	31	45	49	40	40	46	51	3.9%	0.8%	-2.1%	0.0%	1.6%	0.9%
Hydro	38	46	48	54	58	59	60	2.0%	0.4%	1.1%	0.8%	0.2%	0.1%
Wind	0	0	2	17	41	82	108	n.s.	32.7%	22.2%	9.0%	7.2%	2.8%
Solar	0	0	4	37	54	95	100	43.4%	27.1%	26.1%	3.9%	5.9%	0.5%
Other	0	1	1	1	2	2	3	7.0%	0.1%	7.2%	4.7%	1.9%	4.4%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>316</b>	<b>362</b>	<b>342</b>	<b>309</b>	<b>305</b>	<b>288</b>	<b>271</b>	<b>1.4%</b>	<b>-0.6%</b>	<b>-1.0%</b>	<b>-0.1%</b>	<b>-0.6%</b>	<b>-0.6%</b>
Coal	50	46	48	47	50	38	30	-0.8%	0.3%	-0.1%	0.5%	-2.6%	-2.2%
Oil	182	208	170	144	117	91	66	1.3%	-2.0%	-1.7%	-2.1%	-2.5%	-3.1%
Gas	15	23	34	30	33	36	37	4.2%	4.1%	-1.4%	1.1%	0.9%	0.2%
Electricity	64	81	86	80	88	94	101	2.3%	0.6%	-0.8%	1.0%	0.8%	0.7%
Heat	1	1	1	1	2	3	5	0.4%	-2.9%	1.2%	2.8%	7.4%	4.8%
Biomass & Other	3	3	3	7	16	26	30	0.2%	0.3%	10.1%	8.4%	4.9%	1.7%
Share of Renewables <sup>3</sup> (%)	5%	4%	5%	10%	17%	29%	37%	-1.2%	1.8%	7.1%	5.8%	5.5%	2.6%
<b>Industry (incl. non-energy use)</b>	<b>153</b>	<b>158</b>	<b>147</b>	<b>133</b>	<b>136</b>	<b>127</b>	<b>119</b>	<b>0.3%</b>	<b>-0.7%</b>	<b>-1.0%</b>	<b>0.2%</b>	<b>-0.6%</b>	<b>-0.6%</b>
Coal	49	45	47	47	49	38	30	-0.7%	0.4%	-0.1%	0.5%	-2.6%	-2.2%
Oil	69	74	61	51	41	33	27	0.7%	-1.9%	-1.7%	-2.1%	-2.2%	-2.1%
Gas	4	5	8	8	13	18	20	2.9%	4.5%	0.1%	4.5%	3.4%	1.1%
Electricity	29	31	28	24	27	29	31	0.7%	-1.0%	-1.7%	1.3%	0.7%	0.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	3	3	3	3	5	9	11	0.4%	0.4%	2.0%	4.7%	5.9%	1.6%
<b>Buildings</b>	<b>83</b>	<b>110</b>	<b>113</b>	<b>102</b>	<b>103</b>	<b>103</b>	<b>103</b>	<b>2.8%</b>	<b>0.3%</b>	<b>-1.0%</b>	<b>0.1%</b>	<b>0.0%</b>	<b>0.0%</b>
Coal	1	1	1	0	0	0	0	-4.4%	-1.6%	-1.6%	-2.9%	-9.4%	-15.2%
Oil	36	42	29	22	18	14	10	1.6%	-3.6%	-2.9%	-2.1%	-2.5%	-3.0%
Gas	11	18	26	21	18	14	12	4.7%	4.0%	-2.1%	-1.7%	-2.2%	-2.0%
Electricity	34	48	56	54	57	59	62	3.6%	1.5%	-0.4%	0.5%	0.4%	0.5%
Heat	1	1	1	1	2	3	5	0.4%	-2.9%	1.2%	2.8%	7.4%	4.8%
Biomass & Other	0	0	0	3	9	13	14	-11.2%	-20.8%	n.s.	10.5%	3.4%	1.0%
<b>Agriculture</b>	<b>7</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>-2.6%</b>	<b>-4.4%</b>	<b>-0.2%</b>	<b>0.3%</b>	<b>0.3%</b>	<b>0.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	7	5	3	3	3	3	2	-2.6%	-4.3%	-0.2%	0.1%	-2.0%	-3.9%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	1	-0.3%	-5.7%	0.6%	2.0%	10.0%	6.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	28.6%	8.4%
<b>Transport</b>	<b>72</b>	<b>88</b>	<b>78</b>	<b>70</b>	<b>62</b>	<b>54</b>	<b>45</b>	<b>2.0%</b>	<b>-1.2%</b>	<b>-1.1%</b>	<b>-1.1%</b>	<b>-1.4%</b>	<b>-1.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	71	87	77	67	54	41	28	2.0%	-1.2%	-1.3%	-2.1%	-2.8%	-3.9%
Gas	0	0	0	0	2	4	6	n.s.	n.s.	n.s.	18.0%	5.1%	3.1%
Electricity	1	2	2	2	4	6	7	1.0%	0.2%	0.7%	8.5%	4.4%	1.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	2	3	4	n.s.	n.s.	n.s.	12.4%	7.2%	3.3%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>20</b>	<b>23</b>	<b>20</b>	<b>14</b>	<b>14</b>	<b>13</b>	<b>13</b>	<b>1.5%</b>	<b>-1.8%</b>	<b>-3.3%</b>	<b>-0.2%</b>	<b>-0.4%</b>	<b>-0.4%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

<b>Korea (Rep.)</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	43	46	49	51	53	52	51	0.7%	0.6%	0.4%	0.2%	0.0%	-0.3%
GDP per capita (ppp, k\$'05)	11	19	27	34	44	51	57	5.3%	3.5%	2.5%	2.4%	1.5%	1.1%
GDP per capita (mer, k\$'05)	9	15	22	29	36	42	47	5.8%	3.8%	2.5%	2.4%	1.5%	1.1%
Share Value Added - Agriculture (%)	9	5	3	3	3	2	2	-6.4%	-5.5%	-0.2%	-0.3%	-0.2%	-0.1%
Share Value Added - Industry (%)	42	38	39	37	34	32	30	-0.9%	0.2%	-0.4%	-0.8%	-0.7%	-0.5%
Share Value Added - Services (%)	49	57	59	60	63	65	67	1.5%	0.2%	0.3%	0.5%	0.4%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	21	23	-7.8%	10.3%	-2.2%	1.6%	1.4%	0.9%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	28	24	47	43	47	64	85	-1.2%	6.8%	-0.9%	0.9%	3.1%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
<b>Total GHG</b>	<b>282</b>	<b>510</b>	<b>628</b>	<b>664</b>	<b>517</b>	<b>425</b>	<b>367</b>	<b>6.1%</b>	<b>2.1%</b>	<b>0.6%</b>	<b>-2.5%</b>	<b>-1.9%</b>	<b>-1.5%</b>
<b>Total GHG (excl. sinks)</b>	<b>309</b>	<b>537</b>	<b>662</b>	<b>698</b>	<b>549</b>	<b>450</b>	<b>391</b>	<b>5.7%</b>	<b>2.1%</b>	<b>0.5%</b>	<b>-2.4%</b>	<b>-2.0%</b>	<b>-1.4%</b>
<b>Total GHG (energy, industry, agriculture)</b>	<b>309</b>	<b>536</b>	<b>660</b>	<b>692</b>	<b>538</b>	<b>447</b>	<b>391</b>	<b>5.7%</b>	<b>2.1%</b>	<b>0.5%</b>	<b>-2.5%</b>	<b>-1.8%</b>	<b>-1.3%</b>
CO <sub>2</sub>	261	476	607	640	494	402	349	6.2%	2.5%	0.5%	-2.6%	-2.0%	-1.4%
CH <sub>4</sub>	31	31	32	31	28	29	27	-0.1%	0.3%	-0.2%	-1.1%	0.3%	-0.6%
N <sub>2</sub> O	11	16	13	14	12	12	12	4.3%	-2.0%	0.8%	-1.4%	0.0%	-0.3%
F gases	6	13	8	7	4	4	4	7.5%	-4.7%	-1.6%	-4.9%	0.2%	-0.7%
<b>Total GHG from Energy and Industry</b>	<b>289</b>	<b>519</b>	<b>640</b>	<b>668</b>	<b>515</b>	<b>422</b>	<b>366</b>	<b>6.0%</b>	<b>2.1%</b>	<b>0.4%</b>	<b>-2.6%</b>	<b>-2.0%</b>	<b>-1.4%</b>
<b>CO<sub>2</sub> Emissions from Fuel Comb.</b>	<b>237</b>	<b>434</b>	<b>571</b>	<b>599</b>	<b>458</b>	<b>367</b>	<b>316</b>	<b>6.2%</b>	<b>2.8%</b>	<b>0.5%</b>	<b>-2.7%</b>	<b>-2.2%</b>	<b>-1.5%</b>
Power generation/District heating	42	133	264	252	149	88	69	12.1%	7.1%	-0.5%	-5.2%	-5.1%	-2.4%
Industry	64	112	123	151	132	120	110	5.8%	0.9%	2.1%	-1.4%	-0.9%	-0.9%
Buildings	69	65	55	52	47	43	40	-0.6%	-1.7%	-0.5%	-1.0%	-1.0%	-0.8%
Agriculture	5	10	7	6	4	3	2	7.5%	-3.7%	-1.4%	-3.5%	-4.3%	-4.5%
Transport	44	80	91	105	102	94	82	6.2%	1.2%	1.5%	-0.3%	-0.7%	-1.4%
Other	13	33	32	32	24	19	14	10.0%	-0.5%	0.1%	-2.9%	-2.3%	-3.1%
<b>CO<sub>2</sub> captured (CCS)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>43</b>	<b>88</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>14.2%</b>	<b>7.3%</b>
Coal	0	0	0	0	10	38	77	n.s.	n.s.	n.s.	n.s.	14.5%	7.4%
Gas	0	0	0	0	2	5	9	n.s.	n.s.	n.s.	n.s.	12.2%	5.0%
Biomass	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	18.1%	20.3%	20.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
<b>Primary Production</b>	<b>25</b>	<b>37</b>	<b>49</b>	<b>75</b>	<b>127</b>	<b>162</b>	<b>164</b>	<b>4.0%</b>	<b>2.7%</b>	<b>4.4%</b>	<b>5.5%</b>	<b>2.4%</b>	<b>0.2%</b>
Coal	8	4	1	1	0	0	0	-6.5%	-12.7%	-4.7%	-6.6%	-1.4%	1.1%
Oil	0	1	1	0	0	0	0	n.s.	0.4%	n.s.	n.s.	n.s.	n.s.
Natural gas	0	0	0	1	1	1	1	n.s.	n.s.	3.0%	4.8%	1.8%	-1.4%
Biomass	3	3	7	8	9	8	8	2.2%	7.5%	2.4%	0.4%	-0.9%	0.6%
Nuclear <sup>1</sup>	14	29	39	62	109	138	137	7.5%	3.1%	4.7%	5.8%	2.3%	-0.1%
Hydro	1	0	1	1	1	1	1	-1.2%	1.4%	2.9%	0.6%	0.2%	0.1%
Other renewables	0	0	0	2	7	14	17	15.8%	14.6%	30.1%	12.3%	6.4%	2.2%
<b>Net Imports</b>	<b>70</b>	<b>156</b>	<b>208</b>	<b>227</b>	<b>193</b>	<b>172</b>	<b>168</b>						
Coal	17	40	75	75	39	36	40						
Oil	50	98	94	106	95	81	67						
Natural gas	3	17	38	45	59	53	57						
Biomass	0	0	0	1	0	0	0						
Biofuels	0	0	0	0	1	3	4						
Electricity	0	0	0	0	0	0	0						
<b>Primary Energy Demand<sup>2</sup></b>	<b>95</b>	<b>193</b>	<b>257</b>	<b>302</b>	<b>321</b>	<b>334</b>	<b>332</b>	<b>7.4%</b>	<b>2.9%</b>	<b>1.6%</b>	<b>0.6%</b>	<b>0.4%</b>	<b>0.0%</b>
Coal	25	44	76	76	39	36	41	6.1%	5.5%	0.0%	-6.4%	-0.8%	1.2%
Oil	50	99	95	106	95	81	67	7.0%	-0.4%	1.1%	-1.1%	-1.6%	-1.9%
Natural gas	3	17	39	45	60	54	58	20.1%	8.5%	1.6%	2.7%	-1.0%	0.7%
Biomass	3	3	7	9	9	8	8	2.2%	7.4%	2.9%	0.0%	-1.1%	0.6%
Nuclear <sup>1</sup>	14	29	39	62	109	138	137	7.5%	3.1%	4.7%	5.8%	2.3%	-0.1%
Hydro	1	0	1	1	1	1	1	-1.2%	1.4%	2.9%	0.6%	0.2%	0.1%
Other renewables	0	0	0	2	7	14	17	15.8%	14.6%	30.1%	12.3%	6.4%	2.2%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
<b>Primary Energy Demand</b>	<b>95</b>	<b>193</b>	<b>257</b>	<b>302</b>	<b>321</b>	<b>334</b>	<b>332</b>	<b>7.4%</b>	<b>2.9%</b>	<b>1.6%</b>	<b>0.6%</b>	<b>0.4%</b>	<b>0.0%</b>
<b>Energy for Power Generation</b>	<b>27</b>	<b>67</b>	<b>115</b>	<b>140</b>	<b>171</b>	<b>193</b>	<b>202</b>	<b>9.5%</b>	<b>5.6%</b>	<b>2.0%</b>	<b>2.0%</b>	<b>1.2%</b>	<b>0.5%</b>
<b>Other Energy Transformation &amp; Losses</b>	<b>5</b>	<b>18</b>	<b>16</b>	<b>15</b>	<b>14</b>	<b>14</b>	<b>16</b>	<b>12.5%</b>	<b>-1.1%</b>	<b>-0.1%</b>	<b>-1.3%</b>	<b>0.6%</b>	<b>1.0%</b>
<b>Final consumption</b>	<b>71</b>	<b>135</b>	<b>169</b>	<b>200</b>	<b>203</b>	<b>206</b>	<b>202</b>	<b>6.7%</b>	<b>2.3%</b>	<b>1.7%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>-0.2%</b>
Steel, Non-Met. Minerals and Chem.	13	25	32	38	29	25	23	6.5%	2.7%	1.5%	-2.5%	-1.4%	-1.0%
Other Industry	11	21	24	30	34	37	38	7.2%	1.1%	2.2%	1.5%	0.8%	0.1%
Non-Energy Use	7	25	38	48	45	44	41	14.0%	4.4%	2.2%	-0.5%	-0.3%	-0.7%
Residential	14	15	20	21	20	20	19	0.7%	2.9%	0.2%	-0.3%	-0.3%	-0.4%
Services	10	18	21	26	33	38	40	6.4%	1.6%	2.0%	2.6%	1.3%	0.6%
Agriculture	2	4	3	3	4	4	5	8.1%	-1.8%	0.6%	1.5%	1.1%	0.9%
Road	11	22	28	33	35	35	35	7.7%	2.5%	1.6%	0.4%	0.3%	-0.2%
Rail	0	0	0	0	0	0	0	2.9%	-2.7%	0.1%	1.4%	0.8%	0.3%
Aviation	2	3	1	2	2	2	2	3.9%	-11.6%	7.3%	0.8%	0.9%	0.3%
Other Transport	2	1	1	0	0	0	0	-1.4%	-6.1%	-10.4%	0.1%	-1.0%	-1.7%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%



<b>Korea (Rep.)</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>12</b>	<b>37</b>	<b>75</b>	<b>74</b>	<b>54</b>	<b>40</b>	<b>48</b>	<b>11.7%</b>	<b>7.2%</b>	<b>-0.1%</b>	<b>-3.2%</b>	<b>-2.8%</b>	<b>1.6%</b>
Coal	6	24	52	47	21	19	22	15.2%	8.1%	-1.1%	-7.7%	-0.8%	1.5%
Oil	5	8	5	5	4	3	3	5.4%	-4.7%	1.2%	-1.9%	-3.9%	1.2%
Gas	2	6	18	21	26	17	19	10.9%	12.0%	1.8%	2.2%	-4.6%	1.6%
Biomass & Waste	0	0	0	1	2	2	2	n.s.	34.9%	10.4%	5.2%	-1.3%	4.1%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>105</b>	<b>290</b>	<b>499</b>	<b>622</b>	<b>778</b>	<b>905</b>	<b>977</b>	<b>10.7%</b>	<b>5.6%</b>	<b>2.2%</b>	<b>2.3%</b>	<b>1.5%</b>	<b>0.8%</b>
Coal	18	111	219	216	99	92	108	20.2%	7.0%	-0.2%	-7.4%	-0.8%	1.7%
of which CCS	0	0	0	0	10	40	88	n.s.	n.s.	n.s.	n.s.	14.5%	8.2%
Oil	19	35	19	23	19	13	14	6.3%	-5.8%	1.8%	-1.9%	-3.9%	1.3%
Gas	10	29	103	105	134	89	109	11.9%	13.4%	0.2%	2.4%	-4.0%	2.0%
of which CCS	0	0	0	0	4	15	25	n.s.	n.s.	n.s.	n.s.	12.8%	5.4%
Biomass & Waste	0	0	1	3	5	5	10	n.s.	28.1%	10.3%	5.2%	1.0%	6.4%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	32.5%
Nuclear	53	109	149	241	432	549	546	7.5%	3.2%	4.9%	6.0%	2.4%	-0.1%
Hydro	6	6	6	9	9	9	9	-1.2%	1.4%	2.9%	0.6%	0.2%	0.1%
Wind	0	0	1	17	63	110	110	n.s.	48.1%	34.7%	14.0%	5.8%	0.0%
Solar	0	0	1	9	17	36	68	17.5%	n.s.	28.2%	6.4%	7.7%	6.5%
Other	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	30.5%	15.2%	12.1%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>20</b>	<b>49</b>	<b>77</b>	<b>137</b>	<b>196</b>	<b>223</b>	<b>236</b>	<b>9.4%</b>	<b>4.6%</b>	<b>5.9%</b>	<b>3.7%</b>	<b>1.3%</b>	<b>0.6%</b>
Coal	4	14	28	36	34	25	18	14.3%	7.1%	2.4%	-0.5%	-3.2%	-3.3%
of which CCS	0	0	0	0	1	6	14	n.s.	n.s.	n.s.	n.s.	16.7%	8.3%
Oil	4	4	4	6	6	6	7	2.1%	0.0%	2.8%	0.4%	0.4%	0.7%
Gas	3	13	20	41	53	41	39	17.5%	4.6%	7.6%	2.5%	-2.6%	-0.4%
of which CCS	0	0	0	0	1	2	4	n.s.	n.s.	n.s.	n.s.	14.9%	5.1%
Biomass & Waste	0	1	0	1	1	1	2	n.s.	-12.0%	22.9%	-1.9%	0.7%	4.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	32.1%
Nuclear	8	14	18	32	56	70	68	6.1%	2.6%	5.9%	5.8%	2.3%	-0.3%
Hydro	2	3	6	7	7	7	8	3.0%	5.8%	2.2%	0.5%	0.2%	0.1%
Wind	0	0	0	7	26	46	45	n.s.	40.3%	34.0%	13.8%	5.7%	-0.2%
Solar	0	0	1	7	13	27	51	n.s.	n.s.	26.8%	6.3%	7.7%	6.4%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	29.8%	14.7%	11.6%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>71</b>	<b>135</b>	<b>169</b>	<b>200</b>	<b>203</b>	<b>206</b>	<b>202</b>	<b>6.7%</b>	<b>2.3%</b>	<b>1.7%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>-0.2%</b>
Coal	16	15	18	23	14	13	15	-0.5%	1.9%	2.4%	-4.6%	-0.8%	1.0%
Oil	44	80	82	92	83	71	58	6.2%	0.2%	1.2%	-1.1%	-1.5%	-2.0%
Gas	1	11	21	24	33	37	38	32.1%	6.5%	1.6%	3.1%	1.2%	0.3%
Electricity	8	23	39	48	61	70	76	10.8%	5.5%	2.3%	2.3%	1.5%	0.8%
Heat	0	3	4	5	5	5	6	n.s.	2.8%	0.5%	0.4%	0.8%	0.9%
Biomass & Other	3	3	6	8	8	9	9	2.1%	6.4%	2.9%	0.0%	1.0%	0.8%
Share of Renewables <sup>3</sup> (%)	5%	3%	5%	7%	10%	16%	20%	-3.3%	3.9%	3.3%	4.1%	4.1%	2.3%
<b>Industry (incl. non-energy use)</b>	<b>31</b>	<b>71</b>	<b>94</b>	<b>115</b>	<b>109</b>	<b>106</b>	<b>101</b>	<b>8.8%</b>	<b>2.9%</b>	<b>2.0%</b>	<b>-0.5%</b>	<b>-0.2%</b>	<b>-0.5%</b>
Coal	7	14	17	22	14	13	15	8.1%	1.7%	2.7%	-4.4%	-0.7%	1.1%
Oil	18	36	44	50	44	36	29	7.4%	2.0%	1.4%	-1.4%	-1.8%	-2.3%
Gas	0	3	7	11	19	23	23	44.4%	9.4%	4.3%	5.6%	2.0%	0.3%
Electricity	5	13	20	24	26	29	31	10.0%	4.3%	2.2%	0.8%	1.1%	0.5%
Heat	0	2	2	2	2	2	2	n.s.	1.0%	-2.0%	-0.2%	-0.3%	-0.2%
Biomass & Other	1	3	5	6	4	3	1	8.2%	5.1%	2.0%	-3.2%	-4.5%	-5.5%
<b>Buildings</b>	<b>24</b>	<b>33</b>	<b>41</b>	<b>46</b>	<b>53</b>	<b>57</b>	<b>59</b>	<b>3.3%</b>	<b>2.2%</b>	<b>1.2%</b>	<b>1.4%</b>	<b>0.7%</b>	<b>0.3%</b>
Coal	9	1	1	1	0	0	0	-24.1%	4.5%	-3.1%	-14.7%	-16.0%	-16.2%
Oil	10	14	7	7	6	5	4	3.3%	-6.7%	-0.5%	-1.8%	-1.6%	-1.2%
Gas	1	8	12	12	13	12	11	29.6%	4.5%	-0.2%	0.2%	-0.5%	-0.5%
Electricity	3	9	18	22	31	36	38	11.9%	7.1%	2.2%	3.1%	1.5%	0.7%
Heat	0	1	2	3	3	3	4	n.s.	5.5%	2.7%	0.8%	1.4%	1.5%
Biomass & Other	1	0	1	2	2	2	1	-11.3%	10.2%	5.8%	-0.2%	-0.4%	-3.3%
<b>Agriculture</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>8.1%</b>	<b>-1.8%</b>	<b>0.6%</b>	<b>1.5%</b>	<b>1.1%</b>	<b>0.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	3	2	2	1	1	1	7.5%	-3.7%	-1.4%	-3.5%	-4.3%	-4.5%
Gas	0	0	0	0	0	0	0	n.s.	-9.6%	2.9%	-2.3%	-2.9%	-3.2%
Electricity	0	0	1	1	2	3	3	13.8%	6.6%	4.0%	4.7%	2.9%	1.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	19.9%	4.9%	2.3%
<b>Transport</b>	<b>15</b>	<b>27</b>	<b>30</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>37</b>	<b>6.3%</b>	<b>1.2%</b>	<b>1.6%</b>	<b>0.4%</b>	<b>0.3%</b>	<b>-0.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	15	27	29	34	32	29	24	6.3%	0.7%	1.6%	-0.5%	-0.9%	-1.8%
Gas	0	0	1	1	2	2	3	n.s.	n.s.	0.5%	4.3%	3.5%	3.8%
Electricity	0	0	0	0	2	3	4	7.2%	0.7%	4.5%	18.6%	5.7%	2.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	2	4	6	n.s.	n.s.	2.6%	15.5%	8.7%	4.6%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>5</b>	<b>18</b>	<b>16</b>	<b>15</b>	<b>14</b>	<b>14</b>	<b>16</b>	<b>12.5%</b>	<b>-1.1%</b>	<b>-0.1%</b>	<b>-1.3%</b>	<b>0.6%</b>	<b>1.0%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



New Zealand	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	3	4	4	5	5	5	6	1.3%	1.3%	0.8%	0.8%	0.6%	0.4%
GDP per capita (ppp, k\$'05)	19	23	25	30	34	39	45	1.7%	1.1%	1.6%	1.4%	1.4%	1.5%
GDP per capita (mer, k\$'05)	21	24	28	33	38	43	50	1.7%	1.3%	1.7%	1.4%	1.4%	1.5%
Share Value Added - Agriculture (%)	5	4	2	2	2	2	2	-1.8%	-6.8%	-0.4%	-0.7%	-0.6%	-0.5%
Share Value Added - Industry (%)	31	27	27	27	26	24	23	-1.4%	0.1%	0.0%	-0.4%	-0.5%	-0.6%
Share Value Added - Services (%)	64	69	71	71	72	74	75	0.8%	0.3%	0.0%	0.2%	0.2%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	21	23	-7.8%	10.3%	-2.2%	1.6%	1.4%	0.9%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	28	24	47	43	47	64	85	-1.2%	6.8%	-0.9%	0.9%	3.1%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	24	41	43	48	26	24	23	5.6%	0.6%	1.1%	-5.9%	-1.0%	-0.3%
Total GHG (excl. sinks)	61	73	75	74	60	59	58	1.9%	0.2%	-0.1%	-2.1%	-0.2%	-0.1%
Total GHG (energy, industry, agriculture)	61	73	75	74	60	59	58	1.9%	0.2%	-0.1%	-2.1%	-0.2%	-0.1%
CO <sub>2</sub>	25	34	35	37	29	27	26	2.9%	0.4%	0.6%	-2.6%	-0.4%	-0.5%
CH <sub>4</sub>	27	29	28	25	22	22	22	1.0%	-0.3%	-1.1%	-1.6%	0.0%	0.1%
N <sub>2</sub> O	8	10	10	10	9	9	9	1.7%	0.6%	-0.1%	-1.2%	-0.4%	-0.1%
F gases	1	0	1	2	1	1	2	-6.7%	13.5%	3.3%	-3.6%	1.9%	1.6%
Total GHG from Energy and Industry	30	39	41	42	32	31	30	2.6%	0.5%	0.2%	-2.8%	-0.3%	-0.4%
CO <sub>2</sub> Emissions from Fuel Comb.	24	32	32	34	26	24	23	3.0%	0.1%	0.5%	-2.7%	-0.5%	-0.5%
Power generation/District heating	4	6	6	3	1	2	2	5.1%	0.2%	-6.8%	-9.1%	3.5%	1.5%
Industry	7	9	7	12	9	9	9	1.9%	-2.0%	4.8%	-2.3%	-0.1%	0.1%
Buildings	1	1	1	1	1	1	1	0.7%	-0.2%	-2.2%	0.5%	0.9%	-0.1%
Agriculture	1	2	1	2	1	1	0	2.2%	-0.6%	1.1%	-3.9%	-4.3%	-4.3%
Transport	9	12	14	14	11	10	9	3.4%	1.3%	0.2%	-2.2%	-1.2%	-1.2%
Other	1	2	2	2	2	2	2	2.4%	1.3%	1.2%	-2.2%	-0.4%	-1.6%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	38.8%	13.6%	6.6%
Coal	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	23.0%	13.5%	7.0%
Gas	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	13.5%	3.3%
Biomass	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	14.8%	16.3%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	13	15	19	23	22	22	22	1.8%	2.0%	2.4%	-0.7%	-0.1%	0.1%
Coal	1	2	3	3	3	3	2	4.5%	3.8%	0.4%	-2.3%	-0.6%	-0.4%
Oil	3	2	3	4	2	1	0	-2.7%	3.2%	4.3%	-5.6%	-12.0%	-17.0%
Natural gas	4	5	4	4	3	3	2	2.5%	-2.6%	-0.8%	-1.2%	-1.2%	-1.5%
Biomass	1	1	1	1	2	2	3	4.0%	0.7%	1.8%	2.8%	1.8%	1.5%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	5.8%	8.8%
Hydro	2	2	2	2	2	2	2	0.5%	0.1%	-0.3%	0.7%	0.0%	0.2%
Other renewables	2	3	5	9	9	11	12	3.2%	7.4%	5.3%	0.8%	1.7%	0.8%
Net Imports	1	3	1	1	2	4	5						
Coal	0	-1	-2	-2	-2	-2	-2						
Oil	2	4	3	3	3	4	4						
Natural gas	-1	0	0	1	1	2	3						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	13	18	20	25	24	26	27	2.9%	1.1%	2.2%	-0.4%	0.9%	0.6%
Coal	1	1	2	2	1	1	1	-0.3%	2.4%	0.0%	-9.1%	-1.5%	0.9%
Oil	4	6	6	7	5	5	4	2.7%	0.7%	1.0%	-2.3%	-1.1%	-1.1%
Natural gas	3	5	4	4	4	5	6	5.0%	-3.0%	1.6%	-0.1%	1.7%	1.1%
Biomass	1	1	1	1	2	2	2	4.0%	0.7%	1.0%	3.0%	1.9%	1.6%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	5.8%	8.8%
Hydro	2	2	2	2	2	2	2	0.5%	0.1%	-0.3%	0.7%	0.0%	0.2%
Other renewables	2	3	5	9	9	11	12	3.2%	7.4%	5.3%	0.8%	1.7%	0.8%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	13	18	20	25	24	26	27	2.9%	1.1%	2.2%	-0.4%	0.9%	0.6%
Energy for Power Generation	6	7	10	13	13	15	17	2.8%	3.4%	2.1%	0.4%	1.7%	0.9%
Other Energy Transformation & Losses	0	0	0	0	0	0	1	0.5%	-8.2%	8.6%	-1.8%	2.2%	4.1%
Final consumption	10	13	13	15	14	15	16	2.8%	-0.1%	1.7%	-0.6%	0.3%	0.4%
Steel, Non-Met. Minerals and Chem.	1	1	1	2	1	1	1	0.4%	-2.5%	4.1%	-2.8%	-1.2%	-0.8%
Other Industry	3	3	3	4	4	4	5	2.1%	0.3%	2.3%	0.0%	0.9%	0.8%
Non-Energy Use	1	2	1	2	2	2	2	10.3%	-5.8%	7.3%	-1.3%	0.0%	0.3%
Residential	1	1	2	1	1	2	2	1.1%	1.0%	-1.0%	0.2%	0.9%	0.7%
Services	1	1	1	1	1	1	2	1.7%	2.0%	-0.2%	0.9%	1.3%	1.4%
Agriculture	0	1	1	1	1	1	1	2.8%	0.3%	1.5%	0.8%	0.7%	0.6%
Road	3	3	4	4	4	4	3	3.0%	1.7%	0.4%	-1.4%	-0.4%	-0.5%
Rail	0	0	0	0	0	0	0	10.4%	-4.9%	0.9%	0.0%	0.0%	0.1%
Aviation	0	0	0	0	0	0	0	2.4%	-1.6%	-1.3%	0.8%	1.8%	1.7%
Other Transport	0	0	0	0	0	0	0	4.7%	-3.9%	2.1%	-0.4%	-0.6%	-0.6%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

New Zealand	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4.4%</b>	<b>0.9%</b>	<b>-4.5%</b>	<b>-2.5%</b>	<b>4.1%</b>	<b>2.1%</b>
Coal	0	0	0	0	0	0	0	8.2%	2.7%	-1.3%	-16.1%	5.7%	3.3%
Oil	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-12.9%	6.9%	-7.0%
Gas	1	2	2	1	0	1	1	4.3%	-0.7%	-11.4%	-1.4%	6.8%	3.2%
Biomass & Waste	0	0	0	0	0	0	0	1.3%	0.2%	-11.3%	-0.5%	10.6%	4.8%
Other	0	0	1	1	1	1	1	3.2%	7.2%	4.8%	0.5%	1.6%	0.5%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>32</b>	<b>39</b>	<b>44</b>	<b>45</b>	<b>50</b>	<b>58</b>	<b>66</b>	<b>2.0%</b>	<b>1.2%</b>	<b>0.2%</b>	<b>1.0%</b>	<b>1.5%</b>	<b>1.3%</b>
Coal	1	2	2	2	0	1	1	8.8%	2.9%	-1.3%	-15.0%	5.5%	3.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.7%	6.9%
Oil	0	0	0	0	0	0	0	n.s.	n.s.	44.9%	-12.8%	6.9%	-7.0%
Gas	6	10	10	3	3	5	7	5.3%	0.4%	-11.5%	-0.8%	7.0%	3.3%
of which CCS	0	0	0	0	0	2	3	n.s.	n.s.	n.s.	n.s.	14.8%	3.2%
Biomass & Waste	1	1	1	0	0	1	1	1.6%	0.2%	-11.1%	1.0%	10.8%	5.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	16.8%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	23	24	25	24	26	26	26	0.5%	0.1%	-0.3%	0.7%	0.0%	0.2%
Wind	0	0	1	7	10	13	16	n.s.	25.4%	19.0%	4.7%	1.9%	2.2%
Solar	0	0	0	0	1	1	2	n.s.	n.s.	45.9%	14.2%	9.2%	6.9%
Other	2	3	6	9	10	12	12	3.2%	7.2%	4.8%	0.5%	1.6%	0.6%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>7</b>	<b>8</b>	<b>10</b>	<b>13</b>	<b>17</b>	<b>19</b>	<b>24</b>	<b>0.8%</b>	<b>1.9%</b>	<b>3.2%</b>	<b>2.8%</b>	<b>1.1%</b>	<b>2.0%</b>
Coal	1	1	1	0	0	0	0	-1.0%	-4.8%	-1.5%	-7.2%	0.6%	-3.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.8%	8.1%
Oil	0	0	0	0	0	0	0	n.s.	n.s.	-0.2%	1.6%	-0.5%	0.4%
Gas	1	1	2	2	3	2	3	2.7%	4.4%	-0.2%	2.5%	-1.5%	2.2%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	16.9%	5.9%
Biomass & Waste	0	0	0	0	0	0	1	0.9%	8.9%	0.6%	5.3%	-1.4%	2.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	17.0%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	5	5	5	5	6	6	6	0.9%	0.1%	0.1%	0.7%	0.0%	0.2%
Wind	0	0	1	3	4	5	6	n.s.	30.8%	17.0%	4.9%	2.1%	2.3%
Solar	0	0	0	0	1	2	4	n.s.	n.s.	47.7%	15.3%	9.3%	7.1%
Other	0	0	1	2	3	4	4	3.4%	7.1%	11.6%	4.1%	1.5%	1.2%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>10</b>	<b>13</b>	<b>13</b>	<b>15</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>2.8%</b>	<b>-0.1%</b>	<b>1.7%</b>	<b>-0.6%</b>	<b>0.3%</b>	<b>0.4%</b>
Coal	1	1	1	1	1	0	0	-2.3%	1.9%	0.9%	-6.1%	-1.9%	0.4%
Oil	4	5	6	6	5	4	4	2.8%	1.0%	0.5%	-2.3%	-1.1%	-1.1%
Gas	2	3	2	3	3	4	4	5.3%	-5.4%	7.2%	0.0%	0.8%	0.6%
Electricity	2	3	3	3	4	4	5	2.0%	1.3%	0.3%	1.0%	1.5%	1.3%
Heat	0	0	0	0	0	0	0	1.4%	1.6%	-0.1%	0.2%	-0.3%	0.8%
Biomass & Other	1	1	1	1	2	2	2	4.5%	0.7%	1.6%	2.8%	1.3%	1.1%
Share of Renewables <sup>3</sup> (%)	29%	28%	29%	32%	45%	51%	57%	-0.4%	0.6%	1.0%	3.4%	1.3%	1.0%
<b>Industry (incl. non-energy use)</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>3.2%</b>	<b>-1.7%</b>	<b>3.7%</b>	<b>-0.8%</b>	<b>0.3%</b>	<b>0.5%</b>
Coal	1	1	1	1	0	0	0	-2.0%	2.1%	1.3%	-5.9%	-1.7%	0.5%
Oil	1	1	1	1	1	1	1	1.0%	1.0%	2.5%	-0.6%	1.0%	0.6%
Gas	2	3	1	3	3	3	3	5.8%	-6.1%	8.4%	-0.9%	0.4%	0.3%
Electricity	1	1	1	1	1	2	2	2.3%	0.0%	1.1%	0.7%	1.3%	1.0%
Heat	0	0	0	0	0	0	0	2.1%	0.7%	0.0%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	1	1	1	1	1	1	5.6%	0.9%	0.7%	0.2%	-0.9%	-0.2%
<b>Buildings</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>1.4%</b>	<b>1.5%</b>	<b>-0.6%</b>	<b>0.6%</b>	<b>1.1%</b>	<b>1.1%</b>
Coal	0	0	0	0	0	0	0	-5.8%	-4.0%	-5.7%	-15.8%	n.s.	n.s.
Oil	0	0	0	0	0	0	0	0.6%	1.7%	-0.4%	-0.9%	-0.1%	-0.8%
Gas	0	0	0	0	0	0	0	5.6%	-0.5%	-3.2%	3.6%	1.9%	0.4%
Electricity	1	2	2	2	2	2	2	1.5%	2.0%	-0.5%	-0.1%	0.9%	1.3%
Heat	0	0	0	0	0	0	0	-0.4%	3.8%	-0.4%	1.0%	-0.2%	2.4%
Biomass & Other	0	0	0	0	0	0	0	0.1%	-0.5%	2.2%	4.6%	2.3%	1.1%
<b>Agriculture</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2.8%</b>	<b>0.3%</b>	<b>1.5%</b>	<b>0.8%</b>	<b>0.7%</b>	<b>0.6%</b>
Coal	0	0	0	0	0	0	0	4.6%	12.4%	-1.9%	-6.9%	-7.5%	-7.5%
Oil	0	0	0	0	0	0	0	2.3%	-1.4%	1.5%	-3.8%	-4.2%	-4.2%
Gas	0	0	0	0	0	0	0	0.5%	-3.5%	0.7%	-2.6%	-2.9%	-2.9%
Electricity	0	0	0	0	0	0	0	6.6%	4.2%	1.5%	3.1%	2.3%	1.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	24.3%	4.9%	2.2%
<b>Transport</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>3.1%</b>	<b>1.2%</b>	<b>0.3%</b>	<b>-1.2%</b>	<b>-0.3%</b>	<b>-0.3%</b>
Coal	0	0	0	0	0	0	0	0.0%	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	4	5	5	4	3	3	3.3%	1.2%	0.1%	-2.6%	-1.5%	-1.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	16.9%	3.8%	2.6%
Electricity	0	0	0	0	0	0	1	1.8%	-1.1%	18.1%	24.8%	5.3%	2.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	31.6%	10.9%	5.7%	3.3%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0.5%</b>	<b>-8.2%</b>	<b>8.6%</b>	<b>-1.8%</b>	<b>2.2%</b>	<b>4.1%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Rest Pacific	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	6	8	9	11	13	15	17	2.3%	2.0%	1.8%	1.6%	1.4%	1.1%
GDP per capita (ppp, k\$'05)	2	2	2	3	4	6	9	1.2%	1.1%	3.1%	2.7%	3.9%	4.3%
GDP per capita (mer, k\$'05)	1	1	1	2	2	3	5	1.0%	1.0%	3.1%	2.7%	3.9%	4.3%
Share Value Added - Agriculture (%)	5	4	2	1	0	0	0	-1.8%	-6.8%	-10.3%	-10.0%	-10.7%	-7.9%
Share Value Added - Industry (%)	31	27	27	28	28	27	27	-1.4%	0.1%	0.4%	0.0%	-0.1%	-0.3%
Share Value Added - Services (%)	64	69	71	71	72	72	73	0.8%	0.3%	0.1%	0.1%	0.1%	0.1%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	19	21	23	-7.8%	10.3%	-2.2%	1.6%	1.4%	0.9%
Oil	33	32	72	67	94	126	163	-0.2%	8.4%	-0.8%	3.5%	2.9%	2.6%
Gas	28	24	47	43	47	64	85	-1.2%	6.8%	-0.9%	0.9%	3.1%	2.9%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	110	96	102	120	134	147	156	-1.4%	0.6%	1.6%	1.2%	0.9%	0.6%
Total GHG (excl. sinks)	110	96	102	120	134	147	156	-1.4%	0.6%	1.6%	1.2%	0.9%	0.6%
Total GHG (energy, industry, agriculture)	21	13	17	27	37	57	81	-5.1%	2.8%	4.8%	3.5%	4.2%	3.7%
CO <sub>2</sub>	12	5	8	17	27	47	72	-8.8%	5.5%	7.5%	5.0%	5.7%	4.3%
CH <sub>4</sub>	5	4	5	5	5	5	4	-0.7%	0.6%	1.3%	0.4%	-1.3%	-0.4%
N <sub>2</sub> O	5	4	4	5	5	5	5	-3.0%	0.7%	1.8%	0.2%	-0.2%	-0.4%
F gases	0	0	0	0	0	0	0	n.s.	n.s.	5.2%	4.8%	0.6%	4.1%
Total GHG from Energy and Industry	14	7	10	19	30	49	74	-7.0%	4.7%	6.3%	4.5%	5.1%	4.2%
CO <sub>2</sub> Emissions from Fuel Comb.	12	4	7	15	24	42	66	-9.5%	5.1%	7.8%	4.9%	5.8%	4.5%
Power generation/District heating	1	1	2	3	4	7	9	6.3%	2.3%	5.7%	3.0%	4.3%	3.5%
Industry	1	1	3	5	7	12	17	6.7%	10.0%	7.6%	3.2%	4.6%	3.7%
Buildings	0	0	0	0	1	1	1	-5.2%	-2.2%	8.1%	4.8%	2.2%	1.1%
Agriculture	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Transport	1	2	2	3	3	4	6	2.1%	2.5%	3.3%	1.7%	2.9%	2.8%
Other	8	0	0	3	8	19	33	-45.9%	35.9%	22.9%	10.6%	8.4%	5.6%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	40.1%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	38.9%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	40.6%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	6	6	3	6	7	8	9	-1.2%	-7.3%	8.3%	1.2%	1.5%	1.4%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	4	4	0	0	1	1	1	-2.1%	-21.0%	3.7%	4.6%	3.7%	3.1%
Natural gas	0	0	0	0	0	0	0	6.2%	0.0%	-2.5%	-2.2%	3.1%	-0.3%
Biomass	2	2	2	4	4	5	5	0.2%	-0.1%	9.7%	-0.1%	0.3%	0.8%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	0	0	0	0	0	0	0.6%	0.4%	n.s.	n.s.	n.s.	n.s.
Other renewables	0	0	0	1	1	2	2	n.s.	n.s.	10.7%	4.9%	3.5%	1.9%
Net Imports	-1	-2	2	2	5	10	18						
Coal	0	0	0	1	2	5	9						
Oil	-1	-2	2	3	2	2	3						
Natural gas	0	0	0	1	2	4	7						
Biomass	0	0	0	-2	-2	-2	-2						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	6	3	5	8	11	18	26	-5.0%	3.1%	5.3%	3.8%	4.7%	4.0%
Coal	0	0	0	1	2	5	9	n.s.	n.s.	n.s.	13.8%	9.2%	5.9%
Oil	4	1	2	3	3	4	4	-9.4%	3.1%	5.6%	-0.2%	1.2%	1.4%
Natural gas	0	0	1	1	2	5	7	6.1%	19.5%	7.4%	8.2%	6.5%	4.6%
Biomass	2	2	2	2	2	3	3	0.2%	-0.1%	1.1%	0.9%	1.7%	3.0%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	0	0	0	0	0	0	0.6%	0.4%	n.s.	n.s.	n.s.	n.s.
Other renewables	0	0	0	1	1	2	2	n.s.	n.s.	10.7%	4.9%	3.5%	1.9%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	6	3	5	8	11	18	26	-5.0%	3.1%	5.3%	3.8%	4.7%	4.0%
Energy for Power Generation	0	1	1	2	3	4	6	4.9%	5.5%	6.5%	4.0%	4.0%	3.3%
Other Energy Transformation & Losses	3	0	0	1	2	5	9	n.s.	n.s.	24.5%	10.8%	8.5%	5.8%
Final consumption	3	3	4	5	7	10	14	0.9%	2.3%	3.6%	2.5%	3.7%	3.4%
Steel, Non-Met. Minerals and Chem.	0	0	0	0	1	1	1	n.s.	n.s.	3.7%	4.1%	4.0%	3.1%
Other Industry	1	1	1	2	3	5	7	3.1%	2.2%	6.5%	3.3%	5.0%	4.3%
Non-Energy Use	0	0	0	0	0	0	1	n.s.	n.s.	6.1%	4.2%	4.9%	4.2%
Residential	1	1	1	2	2	2	2	-0.2%	0.1%	0.8%	0.5%	0.6%	0.5%
Services	0	0	0	0	0	0	1	2.8%	3.5%	3.9%	4.2%	5.0%	5.0%
Agriculture	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Road	0	1	1	1	1	1	1	2.2%	0.9%	2.8%	1.6%	2.4%	2.5%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Aviation	0	0	0	0	0	1	1	1.4%	2.8%	6.5%	4.7%	5.6%	4.5%
Other Transport	0	0	0	0	0	0	0	0.0%	0.0%	2.3%	3.2%	3.8%	3.7%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest Pacific	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>6.3%</b>	<b>2.6%</b>	<b>6.3%</b>	<b>3.3%</b>	<b>4.5%</b>	<b>4.2%</b>
Coal	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	15.6%	9.5%	5.7%
Oil	0	0	1	1	1	0	0	6.4%	2.6%	4.2%	-2.1%	-2.7%	-1.9%
Gas	0	0	0	0	1	1	2	6.2%	0.0%	10.5%	10.4%	7.2%	5.2%
Biomass & Waste	0	0	0	0	0	0	0	5.4%	-0.1%	12.4%	0.7%	7.3%	9.0%
Other	0	0	0	0	0	0	0	n.s.	n.s.	10.0%	4.2%	2.5%	0.4%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>10</b>	<b>16</b>	<b>27</b>	<b>3.3%</b>	<b>3.5%</b>	<b>3.1%</b>	<b>4.4%</b>	<b>5.3%</b>	<b>5.0%</b>
Coal	0	0	0	0	1	2	4	n.s.	n.s.	n.s.	15.7%	9.8%	5.9%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	2	2	3	3	2	2	6.0%	4.3%	3.9%	-2.2%	-2.8%	-1.8%
Gas	0	0	0	1	4	8	13	5.8%	2.8%	11.5%	10.5%	7.4%	5.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	39.7%
Biomass & Waste	0	0	0	0	0	1	1	1.7%	1.3%	13.1%	2.1%	9.9%	9.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	1	1	1	0	0	0	0	0.6%	0.4%	n.s.	n.s.	n.s.	n.s.
Wind	0	0	0	0	1	2	4	n.s.	n.s.	25.4%	11.2%	9.2%	8.4%
Solar	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	15.2%	10.1%	10.9%
Other	0	0	0	1	1	2	2	n.s.	n.s.	10.0%	4.2%	2.6%	0.9%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>0.7%</b>	<b>4.3%</b>	<b>5.1%</b>	<b>5.6%</b>	<b>5.7%</b>	<b>5.9%</b>
Coal	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	15.9%	9.8%	5.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	52.9%
Oil	0	0	1	1	0	0	0	-0.3%	3.7%	-0.5%	-0.9%	-3.7%	-2.0%
Gas	0	0	0	0	1	2	3	7.4%	0.0%	15.4%	8.8%	7.0%	5.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	39.7%
Biomass & Waste	0	0	0	0	0	0	0	0.0%	9.4%	0.5%	2.1%	9.8%	9.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Wind	0	0	0	0	0	1	2	n.s.	n.s.	24.8%	11.1%	9.0%	8.2%
Solar	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	15.1%	9.9%	10.9%
Other	0	0	0	0	0	0	0	0.0%	28.4%	8.1%	3.5%	2.1%	0.7%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>7</b>	<b>10</b>	<b>14</b>	<b>0.9%</b>	<b>2.3%</b>	<b>3.6%</b>	<b>2.5%</b>	<b>3.7%</b>	<b>3.4%</b>
Coal	0	0	0	0	0	0	1	n.s.	n.s.	25.0%	11.6%	8.8%	6.1%
Oil	1	1	1	2	2	3	3	1.8%	2.3%	5.5%	0.5%	2.1%	1.9%
Gas	0	0	0	1	2	3	5	n.s.	n.s.	6.7%	7.5%	6.1%	4.4%
Electricity	0	0	0	1	1	1	2	3.8%	3.1%	3.1%	4.5%	5.4%	5.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	11.5%	7.6%	3.6%
Biomass & Other	2	2	2	2	2	2	3	0.2%	-0.1%	0.7%	0.4%	1.1%	2.1%
Share of Renewables <sup>3</sup> (%)	65%	60%	49%	37%	33%	29%	29%	-0.7%	-2.0%	-2.7%	-1.1%	-1.3%	-0.2%
<b>Industry (incl. non-energy use)</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>9</b>	<b>3.1%</b>	<b>5.9%</b>	<b>3.5%</b>	<b>4.8%</b>	<b>4.1%</b>	<b>4.1%</b>
Coal	0	0	0	0	0	0	1	n.s.	n.s.	24.0%	12.3%	9.0%	6.2%
Oil	0	0	1	1	1	1	1	8.0%	4.8%	8.1%	-0.5%	1.5%	1.2%
Gas	0	0	0	1	2	3	5	n.s.	n.s.	6.1%	7.0%	6.2%	4.5%
Electricity	0	0	0	0	0	1	1	3.7%	2.4%	3.1%	4.1%	5.5%	5.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	1	0.6%	-0.8%	2.5%	2.4%	3.6%	4.6%
<b>Buildings</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>0.0%</b>	<b>0.3%</b>	<b>1.1%</b>	<b>0.9%</b>	<b>1.3%</b>	<b>1.6%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-2.3%	-3.3%	-5.9%
Oil	0	0	0	0	0	0	0	-5.2%	-2.1%	4.6%	1.7%	0.6%	-0.1%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	11.7%	3.9%	2.1%
Electricity	0	0	0	0	0	0	1	4.0%	4.4%	3.0%	4.0%	4.9%	4.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	11.5%	7.6%	3.6%
Biomass & Other	1	1	1	1	1	1	1	0.1%	0.1%	0.2%	-0.6%	-0.5%	-0.3%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2.1%</b>	<b>1.1%</b>	<b>3.4%</b>	<b>2.3%</b>	<b>3.3%</b>	<b>3.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	1	1	1	1	1	2	2.1%	1.1%	3.2%	1.4%	2.7%	2.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	21.9%	7.4%	5.4%
Electricity	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	31.6%	8.0%	5.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	15.8%	7.7%	6.6%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>9</b>	<b>n.s.</b>	<b>n.s.</b>	<b>24.5%</b>	<b>10.8%</b>	<b>8.5%</b>	<b>5.8%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

World	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	5 308	6 126	6 930	7 762	8 509	9 174	9 750	1.4%	1.2%	1.1%	0.9%	0.8%	0.6%
GDP per capita (ppp, k\$'05)	7	8	10	12	15	20	24	1.5%	2.2%	2.1%	2.6%	2.3%	1.9%
GDP per capita (mer, k\$'05)	6	7	8	9	10	12	14	1.3%	1.3%	1.4%	1.8%	1.8%	1.6%
Share Value Added - Agriculture (%)	8	5	5	5	5	6	6	-3.5%	0.1%	0.0%	0.1%	0.1%	0.1%
Share Value Added - Industry (%)	33	30	30	31	30	27	25	-1.0%	0.1%	0.1%	-0.4%	-0.8%	-0.9%
Share Value Added - Services (%)	59	65	64	64	65	67	69	0.9%	-0.1%	0.0%	0.2%	0.3%	0.3%
<b>Prices</b>													
<b>International (\$'05/boe)</b>													
Coal	16	8	19	15	17	20	25	-6.8%	8.9%	-2.1%	1.4%	1.3%	2.4%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	19	23	32	35	45	37	32	2.3%	3.2%	0.8%	2.6%	-1.9%	-1.4%
<b>GHG emissions (MtCO<sub>2</sub> eq.)</b>													
Total GHG	33 853	36 187	45 396	51 426	44 843	28 089	12 655	0.7%	2.3%	1.3%	-1.4%	-4.6%	-7.7%
Total GHG (excl. sinks)	36 248	39 232	48 277	53 827	48 463	32 894	18 218	0.8%	2.1%	1.1%	-1.0%	-3.8%	-5.7%
Total GHG (energy, industry, agriculture)	31 878	34 490	44 357	50 318	46 830	30 808	15 100	0.8%	2.5%	1.3%	-0.7%	-4.1%	-6.9%
CO <sub>2</sub>	22 847	25 496	33 742	39 652	38 078	24 078	10 188	1.1%	2.8%	1.6%	-0.4%	-4.5%	-8.2%
CH <sub>4</sub>	5 981	6 044	7 182	6 976	5 557	4 095	2 793	0.1%	1.7%	-0.3%	-2.2%	-3.0%	-3.8%
N <sub>2</sub> O	2 747	2 564	2 867	3 057	2 817	2 243	1 691	-0.7%	1.1%	0.6%	-0.8%	-2.3%	-2.8%
F gases	304	386	566	633	378	393	428	2.4%	3.9%	1.1%	-5.0%	0.4%	0.9%
Total GHG from Energy and Industry	26 933	29 688	39 011	44 667	41 834	26 934	12 259	1.0%	2.8%	1.4%	-0.7%	-4.3%	-7.6%
CO <sub>2</sub> Emissions from Fuel Comb.	21 415	23 790	31 110	36 050	33 888	20 423	8 253	1.1%	2.7%	1.5%	-0.6%	-4.9%	-8.7%
Power generation/District heating	6 848	8 416	11 647	12 885	11 409	3 713	-580	2.1%	3.3%	1.0%	-1.2%	-10.6%	n.s.
Industry	4 272	4 299	6 345	7 686	7 417	4 736	2 481	0.1%	4.0%	1.9%	-0.4%	-4.4%	-6.3%
Buildings	2 975	2 752	2 969	2 999	2 704	1 678	687	-0.8%	0.8%	0.1%	-1.0%	-4.7%	-8.5%
Agriculture	427	362	425	467	429	281	181	-1.6%	1.6%	0.9%	-0.8%	-4.1%	-4.3%
Transport	4 662	5 756	6 942	8 480	8 534	7 754	4 813	2.1%	1.9%	2.0%	0.1%	-1.0%	-4.7%
Other	2 230	2 205	2 781	3 533	3 396	2 261	672	-0.1%	2.3%	2.4%	-0.4%	-4.0%	-11.4%
CO <sub>2</sub> captured (CCS)	0	0	0	1	523	5 271	10 009	n.s.	n.s.	n.s.	n.s.	26.0%	6.6%
Coal	0	0	0	1	366	3 083	3 988	n.s.	n.s.	n.s.	n.s.	23.7%	2.6%
Gas	0	0	0	0	155	1 491	2 645	n.s.	n.s.	n.s.	n.s.	25.4%	5.9%
Biomass	0	0	0	0	2	698	3 375	n.s.	n.s.	n.s.	23.8%	n.s.	17.1%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	8 907	10 162	13 072	15 443	16 664	15 817	14 492	1.3%	2.6%	1.7%	0.8%	-0.5%	-0.9%
Coal	2 310	2 454	3 767	4 357	3 632	1 953	1 447	0.6%	4.4%	1.5%	-1.8%	-6.0%	-3.0%
Oil	3 286	3 709	4 191	4 849	4 785	4 101	2 588	1.2%	1.2%	1.5%	-0.1%	-1.5%	-4.5%
Natural gas	1 690	2 072	2 740	3 270	3 875	3 567	2 903	2.1%	2.8%	1.8%	1.7%	-0.8%	-2.0%
Biomass	866	957	1 233	1 416	1 847	2 465	3 183	1.0%	2.6%	1.4%	2.7%	2.9%	2.6%
Nuclear <sup>1</sup>	533	686	728	774	1 267	1 859	2 057	2.6%	0.6%	0.6%	5.1%	3.9%	1.0%
Hydro	188	232	303	378	444	480	500	2.1%	2.7%	2.2%	1.6%	0.8%	0.4%
Other renewables	34	52	110	399	815	1 391	1 813	4.5%	7.7%	13.8%	7.4%	5.5%	2.7%
International Bunkers	236	319	418	555	662	710	470	3.0%	2.7%	2.9%	1.8%	0.7%	-4.0%
Maritime Bunkers	151	202	266	361	435	469	254	2.9%	2.8%	3.1%	1.9%	0.8%	-5.9%
Aviation Bunkers	85	117	152	194	227	241	216	3.2%	2.7%	2.5%	1.6%	0.6%	-1.1%
Oil	85	117	152	193	222	224	164	3.2%	2.7%	2.4%	1.4%	0.1%	-3.1%
Biofuels	0	0	0	1	5	17	52	n.s.	n.s.	n.s.	18.1%	12.3%	11.8%
Regional Energy Demand (excl. bunkers)	8 670	9 843	12 654	14 888	16 002	15 107	14 022	1.3%	2.5%	1.6%	0.7%	-0.6%	-0.7%
Coal	2 310	2 454	3 767	4 357	3 632	1 953	1 447	0.6%	4.4%	1.5%	-1.8%	-6.0%	-3.0%
Oil	3 050	3 390	3 773	4 295	4 128	3 408	2 170	1.1%	1.1%	1.3%	-0.4%	-1.9%	-4.4%
Natural gas	1 690	2 072	2 740	3 270	3 875	3 567	2 903	2.1%	2.8%	1.8%	1.7%	-0.8%	-2.0%
Biomass	866	957	1 233	1 415	1 842	2 449	3 132	1.0%	2.6%	1.4%	2.7%	2.9%	2.5%
Nuclear <sup>1</sup>	533	686	728	774	1 267	1 859	2 057	2.6%	0.6%	0.6%	5.1%	3.9%	1.0%
Hydro	188	232	303	378	444	480	500	2.1%	2.7%	2.2%	1.6%	0.8%	0.4%
Other renewables	34	52	110	399	815	1 391	1 813	4.5%	7.7%	13.8%	7.4%	5.5%	2.7%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	8 907	10 162	13 072	15 443	16 664	15 817	14 492	1.3%	2.6%	1.7%	0.8%	-0.5%	-0.9%
Energy for Power Generation	2 794	3 462	4 659	5 491	6 476	7 096	8 042	2.2%	3.0%	1.7%	1.7%	0.9%	1.3%
Other Energy Transformation & Losses	883	875	1 220	1 506	1 680	1 531	1 563	-0.1%	3.4%	2.1%	1.1%	-0.9%	0.2%
Final consumption (incl. bunkers)	6 406	7 177	9 075	10 837	11 567	10 908	9 371	1.1%	2.4%	1.8%	0.7%	-0.6%	-1.5%
Steel, Non-Met. Minerals and Chem.	834	930	1 400	1 783	1 802	1 360	1 019	1.1%	4.2%	2.4%	0.1%	-2.8%	-2.8%
Other Industry	1 118	1 076	1 351	1 727	1 983	1 956	1 814	-0.4%	2.3%	2.5%	1.4%	-0.1%	-0.8%
Non-Energy Use	492	636	828	955	984	917	734	2.6%	2.7%	1.4%	0.3%	-0.7%	-2.2%
Residential	1 635	1 794	2 047	2 177	2 174	1 959	1 671	0.9%	1.3%	0.6%	0.0%	-1.0%	-1.6%
Services	595	635	830	980	1 154	1 239	1 294	0.6%	2.7%	1.7%	1.6%	0.7%	0.4%
Agriculture	169	147	179	209	236	262	283	-1.3%	2.0%	1.6%	1.2%	1.0%	0.8%
Road	1 132	1 441	1 824	2 190	2 262	2 200	1 817	2.4%	2.4%	1.8%	0.3%	-0.3%	-1.9%
Rail	60	48	52	62	70	77	81	-2.3%	0.8%	1.7%	1.3%	0.9%	0.6%
Aviation	181	225	251	324	383	398	349	2.2%	1.1%	2.6%	1.7%	0.4%	-1.3%
Other Transport	190	244	314	430	518	541	309	2.5%	2.6%	3.2%	1.9%	0.4%	-5.4%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

World	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>2 043</b>	<b>2 496</b>	<b>3 524</b>	<b>3 954</b>	<b>3 971</b>	<b>3 389</b>	<b>3 698</b>	<b>2.0%</b>	<b>3.5%</b>	<b>1.2%</b>	<b>0.0%</b>	<b>-1.6%</b>	<b>0.9%</b>
Coal	1 172	1 504	2 129	2 383	1 933	1 082	910	2.5%	3.5%	1.1%	-2.1%	-5.6%	-1.7%
Oil	335	290	246	222	254	200	126	-1.4%	-1.7%	-1.0%	1.4%	-2.4%	-4.6%
Gas	480	646	1 023	1 153	1 432	1 397	1 455	3.0%	4.7%	1.2%	2.2%	-0.2%	0.4%
Biomass & Waste	53	52	120	183	331	687	1 182	-0.2%	8.7%	4.3%	6.1%	7.6%	5.6%
Other	3	4	6	13	21	23	25	3.6%	2.8%	8.4%	4.5%	1.2%	0.8%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>11 845</b>	<b>15 472</b>	<b>21 554</b>	<b>27 854</b>	<b>35 005</b>	<b>40 897</b>	<b>48 418</b>	<b>2.7%</b>	<b>3.4%</b>	<b>2.6%</b>	<b>2.3%</b>	<b>1.6%</b>	<b>1.7%</b>
Coal	4 423	5 999	8 661	10 442	8 785	4 996	4 334	3.1%	3.7%	1.9%	-1.7%	-5.5%	-1.4%
of which CCS	0	0	0	0	403	3 111	4 034	n.s.	n.s.	n.s.	n.s.	22.7%	2.6%
Oil	1 292	1 178	931	942	1 085	860	545	-0.9%	-2.3%	0.1%	1.4%	-2.3%	-4.5%
Gas	1 762	2 753	4 811	5 761	7 453	7 775	8 732	4.6%	5.7%	1.8%	2.6%	0.4%	1.2%
of which CCS	0	0	0	0	334	3 690	6 734	n.s.	n.s.	n.s.	n.s.	27.2%	6.2%
Biomass & Waste	123	169	380	619	1 276	2 985	5 542	3.2%	8.4%	5.0%	7.5%	8.9%	6.4%
of which CCS	0	0	0	0	0	682	2 863	n.s.	n.s.	n.s.	n.s.	n.s.	15.4%
Nuclear	2 013	2 591	2 756	2 957	4 974	7 435	8 268	2.6%	0.6%	0.7%	5.3%	4.1%	1.1%
Hydro	2 191	2 697	3 529	4 391	5 166	5 585	5 812	2.1%	2.7%	2.2%	1.6%	0.8%	0.4%
Wind	4	31	368	1 946	4 399	7 244	8 670	23.2%	27.9%	18.1%	8.5%	5.1%	1.8%
Solar	1	1	49	622	1 557	3 586	5 805	7.5%	41.8%	29.1%	9.6%	8.7%	4.9%
Other	36	52	68	174	309	431	708	3.6%	2.8%	9.8%	5.9%	3.4%	5.1%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>2 962</b>	<b>3 588</b>	<b>5 162</b>	<b>7 323</b>	<b>9 943</b>	<b>12 202</b>	<b>14 146</b>	<b>1.9%</b>	<b>3.7%</b>	<b>3.6%</b>	<b>3.1%</b>	<b>2.1%</b>	<b>1.5%</b>
Coal	894	1 142	1 702	2 112	2 216	1 519	842	2.5%	4.1%	2.2%	0.5%	-3.7%	-5.7%
of which CCS	0	0	0	0	55	442	685	n.s.	n.s.	n.s.	n.s.	23.1%	4.5%
Oil	630	496	413	424	415	378	352	-2.4%	-1.8%	0.2%	-0.2%	-0.9%	-0.7%
Gas	548	742	1 313	1 608	1 869	1 696	1 831	3.1%	5.9%	2.0%	1.5%	-1.0%	0.8%
of which CCS	0	0	0	0	43	483	979	n.s.	n.s.	n.s.	n.s.	27.3%	7.3%
Biomass & Waste	27	45	99	150	252	518	918	5.1%	8.2%	4.2%	5.4%	7.5%	5.9%
of which CCS	0	0	0	0	0	93	408	n.s.	n.s.	n.s.	n.s.	n.s.	16.0%
Nuclear	290	355	377	404	670	991	1 090	2.1%	0.6%	0.7%	5.2%	4.0%	1.0%
Hydro	564	782	1 020	1 275	1 472	1 586	1 652	3.3%	2.7%	2.3%	1.5%	0.7%	0.4%
Wind	2	17	184	854	1 885	3 031	3 566	23.8%	27.0%	16.6%	8.2%	4.9%	1.6%
Solar	1	2	43	468	1 107	2 402	3 764	6.7%	39.1%	27.0%	9.0%	8.1%	4.6%
Other	6	8	10	30	57	83	131	3.6%	2.2%	11.2%	6.9%	3.7%	4.7%
<b>Total Final Consumption (Mtoe)</b>	<b>6 406</b>	<b>7 177</b>	<b>9 075</b>	<b>10 837</b>	<b>11 567</b>	<b>10 908</b>	<b>9 371</b>	<b>1.1%</b>	<b>2.4%</b>	<b>1.8%</b>	<b>0.7%</b>	<b>-0.6%</b>	<b>-1.5%</b>
Coal	899	704	1 244	1 431	1 220	578	331	-2.4%	5.8%	1.4%	-1.6%	-7.2%	-5.4%
Oil	2 635	3 163	3 668	4 337	4 257	3 697	2 358	1.8%	1.5%	1.7%	-0.2%	-1.4%	-4.4%
Gas	897	1 074	1 277	1 576	1 817	1 610	963	1.8%	1.8%	2.1%	1.4%	-1.2%	-5.0%
Electricity	831	1 086	1 531	1 986	2 498	2 930	3 457	2.7%	3.5%	2.6%	2.3%	1.6%	1.7%
Heat	339	256	293	327	394	520	574	-2.8%	1.4%	1.1%	1.9%	2.8%	1.0%
Biomass & Other	807	895	1 062	1 181	1 380	1 573	1 687	1.0%	1.7%	1.1%	1.6%	1.3%	0.7%
Share of Renewables <sup>2</sup> (%)	17%	18%	18%	19%	24%	34%	46%	0.3%	0.0%	0.7%	2.3%	3.6%	3.0%
<b>Industry (incl. non-energy use)</b>	<b>2 443</b>	<b>2 643</b>	<b>3 578</b>	<b>4 465</b>	<b>4 769</b>	<b>4 233</b>	<b>3 567</b>	<b>0.8%</b>	<b>3.1%</b>	<b>2.2%</b>	<b>0.7%</b>	<b>-1.2%</b>	<b>-1.7%</b>
Coal	629	584	1 089	1 295	1 144	560	326	-0.7%	6.4%	1.8%	-1.2%	-6.9%	-5.3%
Oil	685	798	918	1 043	1 005	868	658	1.5%	1.4%	1.3%	-0.4%	-1.4%	-2.7%
Gas	454	533	623	879	1 068	1 042	660	1.6%	1.6%	3.5%	2.0%	-0.2%	-4.5%
Electricity	381	460	637	896	1 106	1 168	1 252	1.9%	3.3%	3.5%	2.1%	0.5%	0.7%
Heat	163	105	125	135	146	154	158	-4.3%	1.8%	0.8%	0.8%	0.6%	0.3%
Biomass & Other	133	163	185	218	301	441	512	2.0%	1.3%	1.6%	3.3%	3.9%	1.5%
<b>Buildings</b>	<b>2 230</b>	<b>2 429</b>	<b>2 877</b>	<b>3 157</b>	<b>3 329</b>	<b>3 199</b>	<b>2 965</b>	<b>0.9%</b>	<b>1.7%</b>	<b>0.9%</b>	<b>0.5%</b>	<b>-0.4%</b>	<b>-0.8%</b>
Coal	242	108	139	120	65	12	2	-7.8%	2.5%	-1.5%	-5.9%	-15.3%	-16.1%
Oil	316	341	307	320	294	195	83	0.8%	-1.0%	0.4%	-0.8%	-4.0%	-8.2%
Gas	434	532	619	646	647	433	178	2.1%	1.5%	0.4%	0.0%	-3.9%	-8.5%
Electricity	403	581	834	1 003	1 190	1 399	1 664	3.7%	3.7%	1.9%	1.7%	1.6%	1.7%
Heat	176	151	168	192	248	366	416	-1.6%	1.1%	1.4%	2.6%	4.0%	1.3%
Biomass & Other	660	716	812	877	884	793	622	0.8%	1.3%	0.8%	0.1%	-1.1%	-2.4%
<b>Agriculture</b>	<b>169</b>	<b>147</b>	<b>179</b>	<b>209</b>	<b>236</b>	<b>262</b>	<b>283</b>	<b>-1.3%</b>	<b>2.0%</b>	<b>1.6%</b>	<b>1.2%</b>	<b>1.0%</b>	<b>0.8%</b>
Coal	15	8	13	13	9	4	2	-6.8%	5.6%	-0.2%	-3.6%	-8.4%	-8.5%
Oil	110	101	112	125	118	80	52	-0.9%	1.1%	1.1%	-0.6%	-3.9%	-4.2%
Gas	7	6	7	8	8	6	4	-2.5%	2.9%	1.1%	-0.3%	-2.8%	-3.0%
Electricity	30	29	39	54	73	100	126	-0.5%	3.2%	3.2%	3.1%	3.2%	2.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	6	5	7	9	28	72	99	-1.7%	3.9%	2.5%	12.2%	9.8%	3.3%
<b>Transport (incl. bunkers)</b>	<b>1 564</b>	<b>1 958</b>	<b>2 441</b>	<b>3 006</b>	<b>3 233</b>	<b>3 215</b>	<b>2 556</b>	<b>2.3%</b>	<b>2.2%</b>	<b>2.1%</b>	<b>0.7%</b>	<b>-0.1%</b>	<b>-2.3%</b>
Coal	13	5	3	3	2	2	1	-9.8%	-3.4%	-2.4%	-1.9%	-1.9%	-1.9%
Oil	1 524	1 923	2 331	2 849	2 840	2 554	1 565	2.4%	1.9%	2.0%	0.0%	-1.1%	-4.8%
Gas	2	3	28	42	94	129	120	5.2%	24.4%	4.2%	8.4%	3.2%	-0.7%
Electricity	17	16	21	34	129	263	416	-0.7%	2.5%	5.1%	14.4%	7.3%	4.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	8	11	58	78	167	268	454	3.7%	18.1%	3.0%	7.9%	4.8%	5.4%
<b>Other Energy Transformation &amp; Losses<sup>3</sup></b>	<b>883</b>	<b>875</b>	<b>1 220</b>	<b>1 506</b>	<b>1 680</b>	<b>1 531</b>	<b>1 563</b>	<b>-0.1%</b>	<b>3.4%</b>	<b>2.1%</b>	<b>1.1%</b>	<b>-0.9%</b>	<b>0.2%</b>

<sup>2</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>3</sup> includes statistical differences

EU28	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	476	487	503	513	519	524	525	0.2%	0.3%	0.2%	0.1%	0.1%	0.0%
GDP per capita (ppp, k\$'05)	20	25	28	30	34	39	45	1.9%	1.2%	0.8%	1.3%	1.4%	1.4%
GDP per capita (mer, k\$'05)	22	27	30	32	36	42	48	2.0%	1.1%	0.7%	1.2%	1.4%	1.5%
Share Value Added - Agriculture (%)	3	2	2	2	2	1	1	-5.0%	-1.2%	-0.7%	-0.4%	-0.5%	-0.5%
Share Value Added - Industry <sup>1</sup> (%)	34	28	25	25	24	23	21	-1.8%	-1.1%	-0.2%	-0.3%	-0.5%	-0.6%
Share Value Added - Services (%)	63	70	73	74	75	76	77	1.1%	0.5%	0.1%	0.1%	0.2%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	18	23	-6.5%	7.4%	-4.3%	1.5%	2.3%	2.9%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	18	21	30	38	49	38	33	1.4%	3.8%	2.3%	2.5%	-2.4%	-1.6%
<b>GHG emissions (MtCO<sub>2</sub> eq.)</b>													
Total GHG	5 329	4 835	4 448	3 738	2 987	2 057	979	-1.0%	-0.8%	-1.7%	-2.2%	-3.7%	-7.2%
Total GHG (excl. sinks)	5 628	5 166	4 783	4 002	3 260	2 331	1 233	-0.9%	-0.8%	-1.8%	-2.0%	-3.3%	-6.2%
Total GHG (energy, industry, agriculture)	5 598	5 150	4 770	3 987	3 244	2 228	1 125	-0.8%	-0.8%	-1.8%	-2.0%	-3.7%	-6.6%
CO <sub>2</sub>	4 385	4 135	3 899	3 273	2 689	1 817	811	-0.6%	-0.6%	-1.7%	-1.9%	-3.8%	-7.8%
CH <sub>4</sub>	601	495	409	332	262	185	120	-1.9%	-1.9%	-2.0%	-2.3%	-3.4%	-4.2%
N <sub>2</sub> O	557	455	373	312	273	205	170	-2.0%	-2.0%	-1.8%	-1.3%	-2.8%	-1.9%
F gases	56	65	90	70	20	21	24	1.5%	3.3%	-2.5%	-11.5%	0.4%	1.1%
Total GHG from Energy and Industry	4 982	4 629	4 295	3 543	2 832	1 927	879	-0.7%	-0.7%	-1.9%	-2.2%	-3.8%	-7.6%
CO <sub>2</sub> Emissions from Fuel Comb.	4 139	3 897	3 691	3 078	2 519	1 687	752	-0.6%	-0.5%	-1.8%	-2.0%	-3.9%	-7.8%
Power generation/District heating	1 424	1 283	1 235	948	679	391	140	-1.0%	-0.4%	-2.6%	-3.3%	-5.4%	-9.7%
Industry	843	710	554	506	424	325	173	-1.7%	-2.5%	-0.9%	-1.7%	-2.6%	-6.1%
Buildings	724	652	660	489	476	325	155	-1.1%	0.1%	-2.9%	-0.3%	-3.7%	-7.2%
Agriculture	84	72	59	57	57	37	24	-1.5%	-2.0%	-0.4%	0.0%	-4.2%	-4.3%
Transport	764	900	925	846	683	460	231	1.7%	0.3%	-0.9%	-2.1%	-3.9%	-6.6%
Other	300	280	259	232	201	149	29	-0.7%	-0.8%	-1.1%	-1.5%	-2.9%	-15.0%
CO <sub>2</sub> captured (CCS)	0	0	0	1	58	405	805	n.s.	n.s.	n.s.	n.s.	21.5%	7.1%
Coal	0	0	0	0	43	257	382	n.s.	n.s.	n.s.	58.4%	19.6%	4.0%
Gas	0	0	0	0	14	122	282	n.s.	n.s.	n.s.	n.s.	24.2%	8.7%
Biomass	0	0	0	0	1	26	140	n.s.	n.s.	n.s.	27.6%	40.2%	18.5%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	933	965	855	781	783	828	853	0.3%	-1.2%	-0.9%	0.0%	0.6%	0.3%
Coal	357	241	177	131	82	60	42	-3.9%	-3.1%	-2.9%	-4.6%	-3.1%	-3.6%
Oil	136	178	101	68	52	10	7	2.7%	-5.5%	-3.9%	-2.5%	-15.1%	-3.1%
Natural gas	156	194	148	113	96	88	81	2.2%	-2.7%	-2.6%	-1.7%	-0.9%	-0.8%
Biomass	44	63	130	170	209	253	270	3.7%	7.5%	2.7%	2.1%	1.9%	0.7%
Nuclear <sup>1</sup>	210	250	242	202	214	259	245	1.7%	-0.3%	-1.8%	0.6%	1.9%	-0.5%
Hydro	27	33	35	34	35	34	35	2.3%	0.5%	-0.2%	0.1%	-0.2%	0.2%
Other renewables	3	6	22	63	95	124	173	8.0%	13.0%	11.1%	4.2%	2.8%	3.3%
Net Imports	747	761	899	793	728	648	486						
Coal	125	108	123	130	77	64	78						
Oil	479	448	471	418	354	286	153						
Natural gas	139	202	300	227	283	276	226						
Biomass	0	0	2	15	9	13	20						
Biofuels	0	0	2	2	5	7	8						
Electricity	4	2	1	1	1	1	1						
Primary Energy Demand <sup>2</sup>	1 680	1 726	1 754	1 574	1 512	1 476	1 338	0.3%	0.2%	-1.1%	-0.4%	-0.2%	-1.0%
Coal	482	349	299	261	159	124	120	-3.2%	-1.5%	-1.4%	-4.8%	-2.4%	-0.4%
Oil	615	626	572	486	407	297	161	0.2%	-0.9%	-1.6%	-1.8%	-3.1%	-6.0%
Natural gas	295	396	447	340	379	364	307	3.0%	1.2%	-2.7%	1.1%	-0.4%	-1.7%
Biomass	44	63	133	185	218	266	290	3.7%	7.7%	3.4%	1.7%	2.0%	0.9%
Nuclear <sup>1</sup>	210	250	242	202	214	259	245	1.7%	-0.3%	-1.8%	0.6%	1.9%	-0.5%
Hydro	27	33	35	34	35	34	35	2.3%	0.5%	-0.2%	0.1%	-0.2%	0.2%
Other renewables	3	6	22	63	95	124	173	8.0%	13.0%	11.1%	4.2%	2.8%	3.3%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	1 680	1 726	1 754	1 574	1 512	1 476	1 338	0.3%	0.2%	-1.1%	-0.4%	-0.2%	-1.0%
Energy for Power Generation	635	674	722	645	676	793	862	0.6%	0.7%	-1.1%	0.5%	1.6%	0.8%
Other Energy Transformation & Losses	134	119	128	124	123	120	115	-1.2%	0.7%	-0.3%	-0.1%	-0.2%	-0.4%
Final consumption	1 152	1 197	1 217	1 116	1 066	980	842	0.4%	0.2%	-0.9%	-0.5%	-0.8%	-1.5%
Steel, Non-Met. Minerals and Chem.	190	165	139	132	112	97	76	-1.4%	-1.7%	-0.5%	-1.6%	-1.4%	-2.4%
Other Industry	175	163	145	142	141	145	137	-0.8%	-1.1%	-0.2%	0.0%	0.2%	-0.5%
Non-Energy Use	100	113	108	100	90	85	68	1.2%	-0.4%	-0.8%	-1.0%	-0.6%	-2.2%
Residential	276	289	312	262	260	234	195	0.5%	0.8%	-1.7%	-0.1%	-1.1%	-1.8%
Services	118	133	166	150	160	160	156	1.3%	2.2%	-1.0%	0.6%	0.0%	-0.2%
Agriculture	33	29	26	25	26	28	29	-1.4%	-1.1%	-0.3%	0.5%	0.5%	0.5%
Road	237	281	299	285	255	212	163	1.7%	0.6%	-0.5%	-1.1%	-1.8%	-2.6%
Rail	10	10	8	8	8	9	9	0.1%	-1.7%	-0.4%	0.5%	0.4%	0.4%
Aviation	6	7	7	7	7	7	6	2.4%	-0.4%	-0.8%	1.0%	-0.2%	-1.8%
Other Transport	7	6	6	5	5	4	3	-0.9%	-0.8%	-1.9%	0.1%	-3.0%	-3.2%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%



EU28	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>395</b>	<b>385</b>	<b>423</b>	<b>347</b>	<b>333</b>	<b>378</b>	<b>412</b>	<b>-0.3%</b>	<b>0.9%</b>	<b>-1.9%</b>	<b>-0.4%</b>	<b>1.3%</b>	<b>0.9%</b>
Coal	284	234	209	178	98	83	94	-1.9%	-1.1%	-1.6%	-5.8%	-1.6%	1.2%
Oil	55	41	23	10	12	20	11	-2.9%	-5.5%	-8.3%	2.0%	5.0%	-5.3%
Gas	50	94	141	89	127	151	178	6.6%	4.1%	-4.5%	3.6%	1.8%	1.6%
Biomass & Waste	6	15	49	69	95	122	127	9.8%	12.9%	3.5%	3.3%	2.5%	0.4%
Other	0	0	0	1	2	2	2	4.0%	1.6%	8.9%	3.2%	1.6%	0.3%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>2 594</b>	<b>3 031</b>	<b>3 366</b>	<b>3 253</b>	<b>3 589</b>	<b>4 136</b>	<b>4 811</b>	<b>1.6%</b>	<b>1.1%</b>	<b>-0.3%</b>	<b>1.0%</b>	<b>1.4%</b>	<b>1.5%</b>
Coal	1 050	966	862	760	445	398	453	-0.8%	-1.1%	-1.3%	-5.2%	-1.1%	1.3%
of which CCS	0	0	0	0	39	271	435	n.s.	n.s.	n.s.	n.s.	21.4%	4.9%
Oil	224	181	87	42	51	84	49	-2.1%	-7.1%	-7.0%	1.9%	5.1%	-5.2%
Gas	193	480	763	479	681	818	1 074	9.5%	4.8%	-4.5%	3.6%	1.8%	2.8%
of which CCS	0	0	0	0	36	322	777	n.s.	n.s.	n.s.	n.s.	24.6%	9.2%
Biomass & Waste	20	46	143	233	341	453	492	8.9%	12.0%	5.0%	3.9%	2.9%	0.8%
of which CCS	0	0	0	0	0	19	72	n.s.	n.s.	n.s.	n.s.	n.s.	14.6%
Nuclear	795	945	917	765	821	1 009	974	1.7%	-0.3%	-1.8%	0.7%	2.1%	-0.4%
Hydro	309	386	407	397	403	396	403	2.3%	0.5%	-0.2%	0.1%	-0.2%	0.2%
Wind	1	22	149	380	542	628	893	39.8%	21.0%	9.8%	3.6%	1.5%	3.6%
Solar	0	0	33	164	225	210	241	27.8%	n.s.	17.5%	3.2%	-0.7%	1.4%
Other	3	5	6	34	81	140	233	4.0%	1.6%	19.6%	9.2%	5.6%	5.2%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>634</b>	<b>720</b>	<b>923</b>	<b>1 128</b>	<b>1 285</b>	<b>1 200</b>	<b>1 388</b>	<b>1.3%</b>	<b>2.5%</b>	<b>2.0%</b>	<b>1.3%</b>	<b>-0.7%</b>	<b>1.5%</b>
Coal	224	202	193	181	132	77	79	-1.0%	-0.4%	-0.6%	-3.1%	-5.3%	0.3%
of which CCS	0	0	0	0	6	39	69	n.s.	n.s.	n.s.	n.s.	20.3%	5.8%
Oil	95	81	66	37	32	28	28	-1.5%	-2.1%	-5.6%	-1.5%	-1.4%	0.0%
Gas	65	129	220	254	281	192	233	7.1%	5.4%	1.4%	1.0%	-3.7%	2.0%
of which CCS	0	0	0	0	5	43	113	n.s.	n.s.	n.s.	n.s.	23.7%	10.0%
Biomass & Waste	10	17	47	60	80	91	87	5.3%	10.8%	2.4%	3.0%	1.2%	-0.4%
of which CCS	0	0	0	0	0	3	11	n.s.	n.s.	n.s.	n.s.	n.s.	13.3%
Nuclear	123	138	131	110	116	137	129	1.1%	-0.5%	-1.8%	0.5%	1.7%	-0.6%
Hydro	116	140	148	151	154	152	155	1.9%	0.5%	0.2%	0.2%	-0.1%	0.2%
Wind	0	12	85	175	259	290	395	40.0%	21.4%	7.5%	4.0%	1.1%	3.2%
Solar	0	0	31	152	207	193	219	35.9%	n.s.	17.1%	3.2%	-0.7%	1.3%
Other	0	1	1	9	24	41	63	2.0%	2.3%	27.4%	10.8%	5.4%	4.4%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>1 152</b>	<b>1 197</b>	<b>1 217</b>	<b>1 116</b>	<b>1 066</b>	<b>980</b>	<b>842</b>	<b>0.4%</b>	<b>0.2%</b>	<b>-0.9%</b>	<b>-0.5%</b>	<b>-0.8%</b>	<b>-1.5%</b>
Coal	141	73	57	55	41	22	11	-6.3%	-2.5%	-0.4%	-3.0%	-5.8%	-6.7%
Oil	503	540	505	442	367	259	142	0.7%	-0.7%	-1.3%	-1.8%	-3.4%	-5.8%
Gas	229	273	279	226	223	185	107	1.8%	0.2%	-2.1%	-0.1%	-1.9%	-5.3%
Electricity	186	218	244	238	263	305	353	1.6%	1.2%	-0.3%	1.0%	1.5%	1.5%
Heat	55	45	55	51	61	77	89	-1.9%	1.9%	-0.6%	1.7%	2.4%	1.5%
Biomass & Other	38	48	78	104	111	131	139	2.3%	4.9%	2.9%	0.7%	1.7%	0.6%
Share of Renewables <sup>3</sup> (%)	6%	8%	13%	20%	27%	38%	55%	2.5%	4.8%	5.0%	2.9%	3.3%	3.7%
<b>Industry (incl. non-energy use)</b>	<b>466</b>	<b>441</b>	<b>393</b>	<b>374</b>	<b>344</b>	<b>327</b>	<b>282</b>	<b>-0.6%</b>	<b>-1.1%</b>	<b>-0.5%</b>	<b>-0.8%</b>	<b>-0.5%</b>	<b>-1.5%</b>
Coal	93	60	44	46	35	21	11	-4.2%	-3.1%	0.5%	-2.7%	-4.8%	-6.5%
Oil	139	144	127	105	88	77	58	0.3%	-1.3%	-1.8%	-1.8%	-1.4%	-2.8%
Gas	114	118	97	91	84	77	45	0.4%	-1.9%	-0.6%	-0.8%	-0.8%	-5.2%
Electricity	85	91	89	90	97	105	110	0.7%	-0.3%	0.2%	0.8%	0.8%	0.5%
Heat	21	11	15	14	14	13	13	-6.5%	3.6%	-0.7%	-0.2%	-0.3%	-0.2%
Biomass & Other	14	17	22	28	26	33	45	1.9%	2.6%	2.5%	-0.5%	2.4%	3.0%
<b>Buildings</b>	<b>394</b>	<b>423</b>	<b>478</b>	<b>412</b>	<b>420</b>	<b>394</b>	<b>351</b>	<b>0.7%</b>	<b>1.2%</b>	<b>-1.5%</b>	<b>0.2%</b>	<b>-0.6%</b>	<b>-1.1%</b>
Coal	46	12	12	8	5	1	0	-12.8%	0.0%	-4.2%	-4.6%	-17.6%	-18.3%
Oil	89	80	63	50	54	40	19	-1.1%	-2.4%	-2.2%	0.7%	-2.8%	-7.1%
Gas	110	150	177	128	123	83	40	3.2%	1.6%	-3.2%	-0.4%	-3.8%	-7.1%
Electricity	90	116	146	137	139	151	172	2.5%	2.3%	-0.7%	0.2%	0.9%	1.3%
Heat	34	35	40	37	47	64	76	0.2%	1.3%	-0.6%	2.3%	3.1%	1.8%
Biomass & Other	24	30	41	52	53	55	44	2.3%	3.2%	2.6%	0.2%	0.3%	-2.3%
<b>Agriculture</b>	<b>33</b>	<b>29</b>	<b>26</b>	<b>25</b>	<b>26</b>	<b>28</b>	<b>29</b>	<b>-1.4%</b>	<b>-1.1%</b>	<b>-0.3%</b>	<b>0.5%</b>	<b>0.5%</b>	<b>0.5%</b>
Coal	2	1	1	1	1	0	0	-5.0%	0.8%	-2.3%	-2.7%	-9.3%	-9.5%
Oil	21	18	14	14	14	9	6	-1.2%	-2.3%	-0.3%	0.2%	-4.2%	-4.4%
Gas	5	4	4	4	4	3	2	-1.6%	-1.0%	0.0%	0.0%	-3.0%	-3.2%
Electricity	5	4	5	5	5	8	10	-1.7%	1.3%	0.2%	1.3%	3.7%	2.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	1	2	2	2	8	11	2.4%	4.4%	-0.3%	3.0%	12.7%	3.7%
<b>Transport</b>	<b>259</b>	<b>305</b>	<b>320</b>	<b>304</b>	<b>276</b>	<b>231</b>	<b>180</b>	<b>1.6%</b>	<b>0.5%</b>	<b>-0.5%</b>	<b>-1.0%</b>	<b>-1.7%</b>	<b>-2.5%</b>
Coal	0	0	0	0	0	0	0	-26.4%	1.7%	-3.5%	0.0%	0.0%	0.0%
Oil	253	297	300	273	212	133	60	1.6%	0.1%	-1.0%	-2.5%	-4.5%	-7.7%
Gas	0	0	1	3	13	22	20	5.3%	12.9%	9.5%	16.2%	5.0%	-0.7%
Electricity	5	6	5	7	22	41	60	1.3%	-1.4%	2.3%	12.5%	6.7%	3.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	1	14	22	29	35	39	n.s.	34.1%	5.0%	2.8%	1.9%	1.2%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>134</b>	<b>119</b>	<b>128</b>	<b>124</b>	<b>123</b>	<b>120</b>	<b>115</b>	<b>-1.2%</b>	<b>0.7%</b>	<b>-0.3%</b>	<b>-0.1%</b>	<b>-0.2%</b>	<b>-0.4%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Iceland	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	0.3	0.3	0.3	0.3	0.4	0.4	0.4	1.0%	1.2%	0.7%	0.6%	0.4%	0.2%
GDP per capita (ppp, k\$'05)	26	30	33	40	47	56	68	1.6%	0.9%	2.0%	1.7%	1.7%	2.1%
GDP per capita (mer, k\$'05)	41	49	56	69	82	97	119	1.6%	1.4%	2.1%	1.7%	1.7%	2.1%
Share Value Added - Agriculture (%)	12	9	7	7	7	7	7	-2.6%	-2.2%	-0.3%	-0.2%	-0.2%	-0.2%
Share Value Added - Industry (%)	31	26	25	22	19	16	13	-1.6%	-0.4%	-1.2%	-1.5%	-1.7%	-2.5%
Share Value Added - Services (%)	57	65	68	71	74	77	81	1.2%	0.4%	0.4%	0.4%	0.4%	0.5%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	18	23	-6.5%	7.4%	-4.3%	1.5%	2.3%	2.9%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	18	21	30	38	49	38	33	1.4%	3.8%	2.3%	2.5%	-2.4%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	5	4	4	7	6	5	3	-0.4%	-0.8%	5.6%	-1.5%	-2.3%	-3.9%
Total GHG (excl. sinks)	5	4	4	7	6	5	3	-0.3%	-0.6%	5.5%	-1.4%	-2.2%	-3.7%
Total GHG (energy, industry, agriculture)	3	3	3	6	5	4	3	-0.1%	-0.3%	6.6%	-1.7%	-2.6%	-4.7%
CO <sub>2</sub>	2	2	2	5	4	3	2	1.1%	-0.9%	8.4%	-1.2%	-3.2%	-5.6%
CH <sub>4</sub>	0	0	0	0	0	0	0	0.7%	0.4%	-1.3%	-2.3%	-1.7%	-2.0%
N <sub>2</sub> O	1	0	0	1	1	1	1	-0.5%	-0.9%	8.1%	-2.7%	-0.2%	-2.7%
F gases	0	0	0	0	0	0	0	-9.0%	5.2%	-3.7%	-9.0%	-1.5%	-2.5%
Total GHG from Energy and Industry	3	3	3	5	5	3	2	0.1%	-0.4%	7.7%	-1.9%	-2.7%	-5.0%
CO <sub>2</sub> Emissions from Fuel Comb.	2	2	2	4	4	3	1	0.7%	-0.9%	8.5%	-1.7%	-3.1%	-5.8%
Power generation/District heating	0	0	0	1	1	1	0	0.0%	0.0%	n.s.	-5.6%	-1.3%	-2.8%
Industry	1	1	0	1	1	1	0	0.8%	-4.9%	13.1%	1.4%	-5.7%	-8.3%
Buildings	0	0	0	0	0	0	0	-4.8%	-7.5%	25.3%	2.5%	0.4%	-6.5%
Agriculture	1	1	1	1	0	0	0	1.0%	-2.2%	0.6%	-2.7%	-4.0%	-4.0%
Transport	1	1	1	1	1	1	0	0.5%	3.0%	-0.6%	-2.5%	-2.0%	-4.5%
Other	0	0	0	0	0	0	0	n.s.	n.s.	49.1%	1.8%	5.8%	n.s.
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	16.1%	4.4%
Coal	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	16.1%	2.5%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.3%	5.3%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	14.3%	14.8%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	1	2	5	6	7	7	7	10.5%	11.3%	1.3%	2.5%	0.0%	-0.4%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Natural gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	6.2%	1.4%	2.3%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	13.0%	2.6%	-2.9%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	1	1	1	1	1	1	4.2%	7.1%	0.2%	0.2%	0.2%	0.2%
Other renewables	0	1	4	4	6	6	5	16.0%	12.9%	1.4%	2.8%	-0.1%	-0.5%
Net Imports	1	1	1	1	1	1	1						
Coal	0	0	0	1	1	0	0						
Oil	1	1	1	1	0	0	0						
Natural gas	0	0	0	0	0	0	0						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	1	2	6	7	8	8	8	6.5%	8.7%	2.3%	1.8%	-0.1%	-0.6%
Coal	0	0	0	1	1	0	0	4.6%	-1.1%	18.0%	0.9%	-4.0%	-3.6%
Oil	1	1	1	1	0	0	0	0.2%	-1.3%	3.4%	-4.2%	-3.6%	-4.6%
Natural gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	4.6%	7.3%	-1.3%
Biomass	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	12.7%	4.8%	1.3%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	1	1	1	1	1	1	4.2%	7.1%	0.2%	0.2%	0.2%	0.2%
Other renewables	0	1	4	4	6	6	5	16.0%	12.9%	1.4%	2.8%	-0.1%	-0.5%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	1	2	6	7	8	8	8	6.5%	8.7%	2.3%	1.8%	-0.1%	-0.6%
Energy for Power Generation	1	2	5	6	8	8	8	10.8%	11.4%	1.8%	2.0%	0.0%	-0.4%
Other Energy Transformation & Losses	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Final consumption	2	2	3	3	3	3	3	0.9%	3.7%	1.9%	0.7%	-0.3%	-0.8%
Steel, Non-Met. Minerals and Chem.	0	0	0	1	1	0	0	3.9%	-1.0%	11.5%	1.4%	-3.6%	-3.3%
Other Industry	0	0	1	1	1	2	2	5.5%	8.9%	1.7%	0.9%	0.5%	-0.2%
Non-Energy Use	0	0	0	0	0	0	0	-5.4%	-6.9%	-5.5%	-1.3%	-1.9%	-4.3%
Residential	1	0	0	0	0	0	0	-6.0%	2.0%	-0.8%	-0.1%	-0.6%	-1.8%
Services	0	0	0	0	0	0	0	10.6%	1.9%	-0.3%	0.9%	0.6%	0.1%
Agriculture	0	0	0	0	0	0	0	1.0%	-1.9%	1.0%	1.0%	0.8%	0.7%
Road	0	0	0	0	0	0	0	0.9%	2.9%	0.1%	-1.2%	-0.7%	-2.1%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	1.5%	1.4%	1.5%
Aviation	0	0	0	0	0	0	0	-2.0%	-1.2%	-2.2%	0.0%	-0.1%	-2.1%
Other Transport	0	0	0	0	0	0	0	-12.4%	8.2%	-6.5%	0.1%	-1.8%	-2.3%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Iceland	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>15.7%</b>	<b>12.9%</b>	<b>8.1%</b>	<b>-0.1%</b>	<b>0.9%</b>	<b>-1.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-1.6%	-3.5%	-3.3%
Oil	0	0	0	0	0	0	0	0.0%	0.0%	n.s.	-15.7%	-25.4%	n.s.
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	3.7%	9.6%	-0.8%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	0.5%	-0.2%	-1.1%
Other	0	0	0	0	1	1	1	16.0%	12.9%	1.4%	2.6%	-0.3%	-0.7%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>5</b>	<b>8</b>	<b>17</b>	<b>20</b>	<b>22</b>	<b>24</b>	<b>24</b>	<b>5.5%</b>	<b>8.3%</b>	<b>1.6%</b>	<b>1.0%</b>	<b>0.7%</b>	<b>0.2%</b>
Coal	0	0	0	1	1	0	0	n.s.	n.s.	n.s.	-1.6%	-3.7%	-3.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	-1.2%
Oil	0	0	0	1	0	0	0	-1.8%	-8.8%	n.s.	-15.6%	-25.6%	n.s.
Gas	0	0	0	0	1	2	1	n.s.	n.s.	n.s.	4.2%	10.4%	-0.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.6%	5.6%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	1.1%	0.2%	-1.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	4	6	13	13	13	14	14	4.2%	7.1%	0.2%	0.2%	0.2%	0.2%
Wind	0	0	0	0	1	1	2	n.s.	n.s.	n.s.	19.3%	4.3%	2.8%
Solar	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	18.5%	11.4%	5.5%
Other	0	1	4	5	7	7	6	16.0%	12.9%	1.4%	2.6%	-0.1%	-0.2%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>3.9%</b>	<b>6.5%</b>	<b>4.6%</b>	<b>2.7%</b>	<b>2.0%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	1.9%	0.1%	-2.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	13.4%	1.6%
Oil	0	0	0	0	0	0	0	0.3%	-1.9%	10.6%	0.0%	-0.7%	-0.9%
Gas	0	0	0	0	0	1	0	n.s.	n.s.	n.s.	7.2%	12.6%	-1.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	18.2%	7.3%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	0.4%	0.2%	-0.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	1	1	2	2	2	2	2	3.5%	5.9%	0.6%	0.2%	0.2%	0.2%
Wind	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	19.1%	4.2%	2.7%
Solar	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	18.5%	11.4%	5.5%
Other	0	0	1	1	2	2	3	14.4%	12.8%	9.6%	3.8%	1.4%	0.8%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>0.9%</b>	<b>3.7%</b>	<b>1.9%</b>	<b>0.7%</b>	<b>-0.3%</b>	<b>-0.8%</b>
Coal	0	0	0	0	0	0	0	4.6%	-0.9%	15.3%	1.7%	-4.3%	-4.1%
Oil	1	1	1	1	0	0	0	0.2%	-1.3%	0.7%	-2.2%	-3.0%	-4.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	6.1%	2.1%	-3.8%
Electricity	0	1	1	2	2	2	2	5.9%	8.6%	1.9%	1.0%	0.7%	0.3%
Heat	1	0	1	0	0	0	0	-2.9%	1.7%	-2.6%	0.0%	-0.6%	-1.7%
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	14.4%	4.7%	2.1%
Share of Renewables <sup>3</sup> (%)	28%	38%	56%	50%	57%	63%	75%	3.0%	3.9%	-1.1%	1.2%	1.1%	1.7%
<b>Industry (incl. non-energy use)</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>4.0%</b>	<b>6.4%</b>	<b>3.6%</b>	<b>1.0%</b>	<b>-0.6%</b>	<b>-0.8%</b>
Coal	0	0	0	0	0	0	0	4.6%	-0.9%	15.3%	1.7%	-4.3%	-4.1%
Oil	0	0	0	0	0	0	0	-0.2%	-9.4%	4.1%	0.1%	-3.6%	-4.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	10.3%	4.5%	-2.0%
Electricity	0	0	1	1	2	2	2	7.4%	9.9%	1.8%	0.9%	0.4%	-0.2%
Heat	0	0	0	0	0	0	0	-9.3%	1.2%	0.7%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	9.5%	-2.7%	-1.0%
<b>Buildings</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>-1.7%</b>	<b>1.9%</b>	<b>-0.6%</b>	<b>0.4%</b>	<b>0.0%</b>	<b>-0.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	-4.8%	-7.5%	15.9%	1.3%	-0.3%	-6.8%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	3.4%	0.9%	-6.3%
Electricity	0	0	0	0	0	0	0	2.4%	3.1%	1.8%	0.6%	1.1%	1.8%
Heat	1	0	1	0	0	0	0	-2.5%	1.7%	-2.7%	0.0%	-0.6%	-1.8%
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-3.0%	-5.6%	-7.8%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0%</b>	<b>-1.9%</b>	<b>1.0%</b>	<b>1.0%</b>	<b>0.8%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	1.0%	-2.2%	0.6%	-2.7%	-4.0%	-4.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	0.9%	1.1%	1.9%	5.9%	4.7%	3.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	30.2%	6.1%	2.6%
<b>Transport</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0%</b>	<b>2.9%</b>	<b>-0.1%</b>	<b>-1.1%</b>	<b>-0.7%</b>	<b>-2.1%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	0.0%	2.9%	-0.6%	-2.9%	-2.4%	-5.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	17.2%	3.3%	-0.7%
Electricity	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	19.4%	4.8%	3.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	8.5%	3.5%	1.2%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Norway	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	4	4	5	6	6	7	8	0.6%	0.8%	1.4%	1.4%	1.1%	0.8%
GDP per capita (ppp, k\$'05)	32	44	47	49	53	56	60	3.1%	0.7%	0.5%	0.6%	0.6%	0.7%
GDP per capita (mer, k\$'05)	46	62	67	68	73	77	82	3.1%	0.7%	0.3%	0.6%	0.6%	0.7%
Share Value Added - Agriculture (%)	3	2	2	2	2	2	2	-4.8%	-2.7%	-0.1%	-0.1%	-0.1%	-0.1%
Share Value Added - Industry (%)	34	42	40	39	36	34	32	2.1%	-0.5%	-0.3%	-0.6%	-0.6%	-0.8%
Share Value Added - Services (%)	63	56	59	60	62	64	67	-1.1%	0.5%	0.2%	0.4%	0.3%	0.4%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	18	23	-6.5%	7.4%	-4.3%	1.5%	2.3%	2.9%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	18	21	30	38	49	38	33	1.4%	3.8%	2.3%	2.5%	-2.4%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	39	28	26	29	19	11	-19	-3.3%	-0.7%	1.0%	-3.8%	-5.7%	n.s.
Total GHG (excl. sinks)	50	53	54	53	46	40	8	0.7%	0.2%	-0.3%	-1.3%	-1.6%	-15.2%
Total GHG (energy, industry, agriculture)	49	52	53	52	46	40	8	0.5%	0.2%	-0.1%	-1.1%	-1.6%	-15.2%
CO <sub>2</sub>	32	38	43	43	40	34	4	1.7%	1.2%	0.1%	-0.8%	-1.4%	-19.9%
CH <sub>4</sub>	5	5	4	4	3	2	2	0.0%	-1.1%	-1.7%	-2.6%	-2.3%	-1.7%
N <sub>2</sub> O	6	6	4	4	4	3	2	-0.2%	-3.5%	-0.2%	-1.6%	-2.5%	-4.9%
F gases	6	3	1	1	0	0	0	-7.5%	-7.6%	-1.9%	-9.8%	-0.1%	-0.2%
Total GHG from Energy and Industry	44	47	48	47	42	36	5	0.6%	0.3%	-0.3%	-1.2%	-1.5%	-18.4%
CO <sub>2</sub> Emissions from Fuel Comb.	27	32	38	38	35	30	2	1.5%	1.8%	-0.1%	-0.9%	-1.3%	-24.5%
Power generation/District heating	0	0	2	1	1	1	-11	3.3%	28.4%	-5.8%	-2.5%	0.6%	n.s.
Industry	6	6	7	8	7	5	2	1.5%	1.0%	1.0%	-0.4%	-3.2%	-9.6%
Buildings	3	1	2	1	1	0	0	-5.2%	0.3%	-5.4%	-3.1%	-3.7%	-9.4%
Agriculture	1	2	2	2	1	1	1	2.6%	0.7%	-1.7%	-2.8%	-4.1%	-4.2%
Transport	10	12	14	15	12	10	5	1.5%	1.8%	0.6%	-1.7%	-2.6%	-5.8%
Other	8	10	12	12	12	13	5	2.9%	1.2%	0.0%	0.3%	0.9%	-9.5%
CO <sub>2</sub> captured (CCS)	0	0	0	0	1	7	16	n.s.	n.s.	n.s.	n.s.	17.4%	9.5%
Coal	0	0	0	0	0	4	1	n.s.	n.s.	n.s.	n.s.	28.6%	-13.8%
Gas	0	0	0	0	1	3	2	n.s.	n.s.	n.s.	n.s.	10.7%	-2.2%
Biomass	0	0	0	0	0	0	13	n.s.	n.s.	n.s.	n.s.	20.8%	52.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	117	220	207	168	133	77	64	6.5%	-0.6%	-2.1%	-2.3%	-5.3%	-1.8%
Coal	0	0	1	2	2	2	1	8.6%	11.5%	3.6%	-0.9%	-0.3%	-7.2%
Oil	85	165	105	77	46	5	0	6.9%	-4.4%	-3.0%	-5.1%	-20.0%	-21.0%
Natural gas	21	41	89	72	67	51	40	6.8%	8.0%	-2.0%	-0.7%	-2.8%	-2.3%
Biomass	1	1	1	4	4	5	7	2.8%	0.7%	10.9%	1.0%	1.7%	3.6%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	10.5%	15.0%
Hydro	10	12	10	12	12	12	12	1.6%	-1.9%	1.4%	0.2%	0.0%	0.1%
Other renewables	0	0	0	1	2	3	4	n.s.	38.4%	23.6%	9.6%	5.5%	2.2%
Net Imports	-96	-194	-173	-134	-96	-39	-30						
Coal	1	1	0	0	0	0	0						
Oil	-76	-156	-92	-64	-34	5	7						
Natural gas	-19	-37	-81	-67	-61	-43	-36						
Biomass	0	0	0	-1	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	-1	-2	1	-1	-1	-1	-1						
Primary Energy Demand <sup>2</sup>	21	26	34	34	36	38	34	2.1%	2.6%	-0.1%	0.6%	0.5%	-1.0%
Coal	1	1	1	2	2	2	1	2.0%	-2.5%	5.4%	0.9%	0.8%	-9.2%
Oil	8	9	13	13	12	10	8	0.7%	3.8%	0.1%	-1.3%	-1.5%	-2.5%
Natural gas	2	4	8	5	6	8	4	7.7%	6.4%	-3.8%	1.8%	2.3%	-6.1%
Biomass	1	1	1	3	4	5	7	2.9%	1.0%	7.1%	4.1%	1.5%	4.1%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	10.5%	15.0%
Hydro	10	12	10	12	12	12	12	1.6%	-1.9%	1.4%	0.2%	0.0%	0.1%
Other renewables	0	0	0	1	2	3	4	n.s.	38.4%	23.6%	9.6%	5.5%	2.2%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	21	26	34	34	36	38	34	2.1%	2.6%	-0.1%	0.6%	0.5%	-1.0%
Energy for Power Generation	11	12	11	15	16	19	20	1.6%	-1.0%	2.6%	1.3%	1.2%	0.9%
Other Energy Transformation & Losses	2	4	12	8	9	11	8	7.0%	12.6%	-3.5%	1.2%	1.5%	-2.8%
Final consumption	17	20	21	22	22	22	21	1.3%	0.7%	0.1%	0.3%	-0.1%	-0.7%
Steel, Non-Met. Minerals and Chem.	2	3	2	3	4	3	2	1.8%	-1.2%	3.4%	0.2%	-2.1%	-2.3%
Other Industry	4	4	4	4	4	4	4	1.0%	-1.2%	0.4%	0.7%	0.7%	0.0%
Non-Energy Use	2	2	2	2	2	2	2	1.6%	0.5%	0.2%	-0.3%	-0.6%	-2.3%
Residential	4	4	4	4	4	5	5	0.6%	1.5%	-1.2%	0.8%	0.9%	0.5%
Services	2	2	3	3	3	3	3	0.4%	3.0%	-1.3%	1.0%	1.1%	0.9%
Agriculture	1	1	1	1	1	1	1	4.2%	0.7%	-0.9%	1.0%	0.8%	0.7%
Road	3	3	4	4	3	3	2	1.4%	1.9%	0.1%	-0.9%	-1.1%	-3.0%
Rail	0	0	0	0	0	0	0	-2.2%	0.2%	0.7%	1.1%	0.8%	0.7%
Aviation	0	0	0	0	1	1	1	13.4%	2.4%	2.2%	1.4%	0.8%	-1.4%
Other Transport	1	1	1	1	1	1	0	1.1%	1.3%	-1.3%	-0.2%	-2.4%	-3.1%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Norway	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>3.1%</b>	<b>22.1%</b>	<b>8.4%</b>	<b>2.6%</b>	<b>2.8%</b>	<b>1.8%</b>
Coal	0	0	0	0	0	1	0	0.1%	1.6%	3.3%	6.4%	28.6%	-39.1%
Oil	0	0	0	0	0	0	0	-8.8%	10.6%	n.s.	n.s.	n.s.	n.s.
Gas	0	0	1	0	0	1	0	n.s.	39.8%	-6.4%	-1.0%	6.8%	-9.6%
Biomass & Waste	0	0	0	2	3	2	4	1.9%	8.9%	24.8%	3.2%	-0.5%	6.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>122</b>	<b>143</b>	<b>124</b>	<b>151</b>	<b>167</b>	<b>184</b>	<b>199</b>	<b>1.6%</b>	<b>-1.4%</b>	<b>2.1%</b>	<b>1.0%</b>	<b>1.0%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	4	0	-1.3%	3.8%	5.4%	5.0%	29.1%	-39.0%
of which CCS	0	0	0	0	0	4	0	n.s.	n.s.	n.s.	n.s.	29.1%	-39.1%
Oil	0	0	0	0	0	0	0	4.1%	13.2%	n.s.	n.s.	n.s.	n.s.
Gas	0	0	5	2	2	4	1	n.s.	36.9%	-7.1%	-1.0%	7.1%	-9.8%
of which CCS	0	0	0	0	0	2	0	n.s.	n.s.	n.s.	n.s.	37.6%	-22.7%
Biomass & Waste	0	0	0	7	10	10	21	1.7%	4.7%	31.7%	3.3%	-0.3%	8.1%
of which CCS	0	0	0	0	0	0	14	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	121	142	117	134	137	136	138	1.6%	-1.9%	1.4%	0.2%	0.0%	0.1%
Wind	0	0	1	7	17	29	35	n.s.	40.5%	23.2%	8.5%	5.5%	2.0%
Solar	0	0	0	0	1	2	3	n.s.	4.2%	33.5%	20.1%	6.4%	5.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	33.7%	17.4%	14.7%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>27</b>	<b>28</b>	<b>33</b>	<b>45</b>	<b>57</b>	<b>66</b>	<b>68</b>	<b>0.5%</b>	<b>1.4%</b>	<b>3.2%</b>	<b>2.3%</b>	<b>1.5%</b>	<b>0.4%</b>
Coal	0	0	0	4	7	9	6	5.9%	-4.6%	55.6%	5.3%	3.0%	-4.3%
of which CCS	0	0	0	0	1	4	5	n.s.	n.s.	n.s.	n.s.	17.5%	1.6%
Oil	0	0	0	1	2	2	2	-17.6%	7.2%	41.0%	5.1%	-0.4%	-0.8%
Gas	0	0	1	3	6	8	7	n.s.	44.5%	8.2%	7.0%	2.5%	-0.8%
of which CCS	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	22.4%	6.0%
Biomass & Waste	0	0	0	1	1	1	4	7.7%	-1.7%	27.8%	0.4%	-0.7%	11.7%
of which CCS	0	0	0	0	0	0	3	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	27	28	31	32	33	33	33	0.5%	0.9%	0.4%	0.2%	0.0%	0.1%
Wind	0	0	0	3	6	11	13	n.s.	42.1%	20.8%	8.3%	5.3%	1.9%
Solar	0	0	0	0	1	2	3	n.s.	4.2%	33.5%	20.1%	6.4%	5.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.9%	14.2%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>17</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>22</b>	<b>22</b>	<b>21</b>	<b>1.3%</b>	<b>0.7%</b>	<b>0.1%</b>	<b>0.3%</b>	<b>-0.1%</b>	<b>-0.7%</b>
Coal	1	1	1	2	2	1	1	2.1%	-4.0%	8.6%	0.7%	-4.5%	-5.1%
Oil	7	8	9	8	6	5	3	0.2%	1.3%	-0.9%	-2.1%	-2.8%	-5.0%
Gas	0	1	1	1	1	2	1	n.s.	2.0%	3.9%	3.0%	0.9%	-4.9%
Electricity	8	9	10	10	11	12	13	1.2%	0.4%	0.1%	1.1%	1.1%	0.8%
Heat	0	0	0	0	1	1	1	5.6%	11.6%	1.1%	3.7%	2.1%	0.6%
Biomass & Other	1	1	1	1	1	2	2	2.9%	0.8%	-3.5%	3.4%	2.9%	2.3%
Share of Renewables <sup>3</sup> (%)	67%	70%	55%	64%	72%	82%	101%	0.3%	-2.4%	1.5%	1.3%	1.3%	2.1%
<b>Industry (incl. non-energy use)</b>	<b>8</b>	<b>9</b>	<b>8</b>	<b>10</b>	<b>10</b>	<b>9</b>	<b>8</b>	<b>1.4%</b>	<b>-0.7%</b>	<b>1.3%</b>	<b>0.3%</b>	<b>-0.5%</b>	<b>-1.1%</b>
Coal	1	1	1	2	2	1	1	2.2%	-4.0%	8.5%	0.7%	-4.5%	-5.1%
Oil	3	2	3	2	2	2	1	-1.3%	1.4%	-1.4%	-1.8%	-2.2%	-2.9%
Gas	0	1	1	1	1	1	1	n.s.	1.3%	3.5%	1.7%	0.2%	-6.6%
Electricity	4	4	4	4	5	5	5	1.2%	-1.5%	1.2%	0.5%	0.6%	0.2%
Heat	0	0	0	0	0	0	0	1.9%	7.1%	2.3%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	1	0	0	0	1	1	4.6%	-3.1%	-4.1%	3.6%	4.1%	4.0%
<b>Buildings</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>8</b>	<b>0.5%</b>	<b>2.0%</b>	<b>-1.2%</b>	<b>0.9%</b>	<b>1.0%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	0	0	-7.8%	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	0	0	0	0	0	0	-5.1%	0.0%	-6.6%	-5.3%	-6.1%	-10.6%
Gas	0	0	0	0	0	0	0	n.s.	36.3%	8.4%	4.3%	0.1%	-8.3%
Electricity	4	5	6	5	6	6	7	1.1%	1.8%	-0.7%	0.9%	1.1%	1.0%
Heat	0	0	0	0	1	1	1	6.5%	12.3%	1.0%	4.2%	2.3%	0.6%
Biomass & Other	1	1	1	0	0	0	0	1.5%	2.2%	-4.6%	-1.2%	-0.8%	-1.9%
<b>Agriculture</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4.2%</b>	<b>0.7%</b>	<b>-0.9%</b>	<b>1.0%</b>	<b>0.8%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	1	1	1	0	0	0	2.7%	0.4%	-1.6%	-2.8%	-4.2%	-4.2%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	-3.3%	-1.9%	-2.9%	-2.9%
Electricity	0	0	0	0	0	0	0	12.0%	0.4%	1.0%	3.7%	2.8%	1.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	10.2%	11.5%	25.9%	6.4%	2.6%
<b>Transport</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>1.8%</b>	<b>1.8%</b>	<b>0.1%</b>	<b>-0.5%</b>	<b>-1.0%</b>	<b>-2.6%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	4	5	5	4	3	1	1.8%	1.5%	-0.1%	-2.0%	-2.9%	-6.5%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	24.6%	17.4%	4.8%	0.2%
Electricity	0	0	0	0	0	1	1	-0.4%	1.0%	3.8%	15.2%	5.6%	3.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	1	n.s.	n.s.	2.5%	7.9%	3.8%	2.5%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>2</b>	<b>4</b>	<b>12</b>	<b>8</b>	<b>9</b>	<b>11</b>	<b>8</b>	<b>7.0%</b>	<b>12.6%</b>	<b>-3.5%</b>	<b>1.2%</b>	<b>1.5%</b>	<b>-2.8%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Switzerland	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	7	7	8	9	9	10	10	0.7%	0.9%	1.0%	0.6%	0.5%	0.4%
GDP per capita (ppp, k\$'05)	35	36	39	41	46	52	58	0.4%	0.8%	0.5%	1.2%	1.2%	1.1%
GDP per capita (mer, k\$'05)	50	53	58	61	69	77	86	0.5%	1.0%	0.6%	1.2%	1.2%	1.1%
Share Value Added - Agriculture (%)	15	9	5	5	5	5	5	-4.7%	-5.5%	-0.1%	-0.1%	-0.1%	-0.1%
Share Value Added - Industry (%)	31	27	26	25	23	20	18	-1.6%	-0.2%	-0.3%	-1.0%	-1.1%	-1.2%
Share Value Added - Services (%)	54	64	69	70	72	75	77	1.8%	0.7%	0.1%	0.4%	0.3%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	18	23	-6.5%	7.4%	-4.3%	1.5%	2.3%	2.9%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	18	21	30	38	49	38	33	1.4%	3.8%	2.3%	2.5%	-2.4%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	50	49	49	46	34	23	6	-0.2%	0.1%	-0.7%	-2.9%	-3.7%	-12.8%
Total GHG (excl. sinks)	52	49	50	47	35	25	7	-0.5%	0.2%	-0.7%	-2.8%	-3.5%	-11.7%
Total GHG (energy, industry, agriculture)	52	49	50	47	35	25	7	-0.6%	0.2%	-0.7%	-2.8%	-3.5%	-11.7%
CO <sub>2</sub>	43	41	42	39	29	18	1	-0.6%	0.2%	-0.7%	-2.9%	-4.4%	-24.8%
CH <sub>4</sub>	5	4	4	4	3	3	3	-1.3%	-0.6%	-0.6%	-0.5%	-0.2%	-0.3%
N <sub>2</sub> O	4	3	3	3	3	3	2	-0.7%	-0.1%	-0.4%	-1.6%	-0.6%	-0.5%
F gases	0	1	1	1	0	0	0	11.6%	6.2%	-1.3%	-11.1%	-0.4%	0.4%
Total GHG from Energy and Industry	46	44	45	41	30	19	2	-0.5%	0.2%	-0.8%	-3.2%	-4.3%	-22.1%
CO <sub>2</sub> Emissions from Fuel Comb.	40	39	40	36	27	17	0	-0.4%	0.2%	-0.8%	-3.1%	-4.5%	-33.7%
Power generation/District heating	1	1	1	0	0	0	-5	-1.1%	-0.1%	-12.5%	-2.5%	0.0%	n.s.
Industry	5	5	5	5	4	3	1	-0.7%	-0.6%	0.3%	-1.0%	-5.3%	-13.4%
Buildings	19	16	17	11	7	4	1	-1.4%	0.2%	-4.2%	-3.8%	-5.3%	-11.2%
Agriculture	0	0	0	0	0	0	0	-5.1%	-16.9%	4.5%	-1.9%	-2.9%	-3.0%
Transport	14	16	16	19	14	9	4	0.8%	0.3%	1.6%	-3.3%	-3.9%	-7.9%
Other	1	1	1	2	1	1	-1	3.8%	2.2%	1.4%	-4.0%	-6.1%	n.s.
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	1	8	n.s.	n.s.	n.s.	n.s.	8.1%	23.8%
Coal	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	6.4%	3.7%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	0.2%	19.4%
Biomass	0	0	0	0	0	0	7	n.s.	n.s.	n.s.	n.s.	18.7%	39.8%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	10	12	13	13	16	19	20	1.5%	0.4%	0.5%	2.1%	1.4%	0.7%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Natural gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	6.5%	1.6%	2.5%
Biomass	1	2	2	2	2	3	5	2.1%	2.6%	-2.3%	1.7%	1.8%	6.3%
Nuclear <sup>1</sup>	6	7	7	7	9	10	8	1.1%	0.0%	0.3%	2.4%	0.9%	-2.4%
Hydro	3	3	3	3	3	3	3	2.1%	-0.1%	0.4%	0.0%	0.0%	0.0%
Other renewables	0	0	0	1	2	3	4	18.5%	13.6%	31.3%	7.0%	5.4%	3.9%
Net Imports	14	13	14	13	9	6	2						
Coal	0	0	0	0	0	0	0						
Oil	12	11	10	10	7	4	2						
Natural gas	2	2	3	3	3	2	1						
Biomass	0	0	0	0	0	0	-1						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	-1	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	24	25	26	26	26	25	22	0.4%	0.4%	-0.1%	-0.1%	-0.4%	-1.0%
Coal	0	0	0	0	0	0	0	-8.6%	0.0%	7.6%	2.3%	-2.4%	-1.5%
Oil	12	11	10	10	7	4	2	-0.8%	-0.6%	0.1%	-3.9%	-4.8%	-8.5%
Natural gas	2	2	3	3	3	2	1	4.0%	2.1%	-0.9%	-0.1%	-2.2%	-6.0%
Biomass	1	2	2	1	2	2	4	2.0%	2.7%	-4.8%	2.4%	2.3%	6.6%
Nuclear <sup>1</sup>	6	7	7	7	9	10	8	1.1%	0.0%	0.3%	2.4%	0.9%	-2.4%
Hydro	3	3	3	3	3	3	3	2.1%	-0.1%	0.4%	0.0%	0.0%	0.0%
Other renewables	0	0	0	1	2	3	4	18.5%	13.6%	31.3%	7.0%	5.4%	3.9%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	24	25	26	26	26	25	22	0.4%	0.4%	-0.1%	-0.1%	-0.4%	-1.0%
Energy for Power Generation	10	11	12	11	14	16	17	1.6%	0.2%	-0.1%	2.2%	1.3%	0.4%
Other Energy Transformation & Losses	0	-1	0	0	1	1	1	n.s.	n.s.	n.s.	3.7%	3.1%	5.0%
Final consumption	19	19	21	20	19	17	15	0.3%	0.7%	-0.2%	-0.8%	-0.9%	-1.4%
Steel, Non-Met. Minerals and Chem.	1	1	1	2	2	1	1	1.0%	0.7%	2.0%	0.1%	-1.9%	-2.1%
Other Industry	2	2	2	2	2	2	2	1.0%	0.0%	-0.5%	0.3%	0.0%	-0.6%
Non-Energy Use	1	1	1	0	0	0	0	0.2%	-0.6%	-1.0%	-1.9%	-2.1%	-4.0%
Residential	6	5	6	5	5	5	4	-0.8%	1.4%	-2.0%	-0.7%	-0.6%	-1.0%
Services	3	3	4	3	3	3	3	0.0%	1.2%	-1.5%	0.0%	0.2%	-0.2%
Agriculture	0	0	0	0	0	0	0	1.0%	-5.2%	0.9%	0.9%	0.9%	0.9%
Road	5	5	6	7	6	4	3	1.4%	0.3%	1.7%	-2.0%	-2.0%	-3.3%
Rail	0	0	0	0	0	0	0	0.3%	1.8%	0.1%	1.1%	1.0%	0.9%
Aviation	0	0	0	0	0	0	0	-4.9%	-2.8%	5.0%	-0.5%	-0.9%	-3.0%
Other Transport	0	0	0	0	0	0	0	2.3%	-1.0%	-1.0%	-0.6%	-2.7%	-3.3%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Switzerland	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>3.1%</b>	<b>2.2%</b>	<b>-26.3%</b>	<b>-2.5%</b>	<b>0.0%</b>	<b>41.5%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	-10.1%	-13.2%	n.s.	n.s.	n.s.	n.s.
Gas	0	0	0	0	0	0	0	9.0%	2.0%	-12.0%	-2.5%	0.0%	8.1%
Biomass & Waste	1	1	1	0	0	0	1	4.0%	2.7%	n.s.	n.s.	n.s.	n.s.
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>56</b>	<b>68</b>	<b>68</b>	<b>75</b>	<b>89</b>	<b>101</b>	<b>111</b>	<b>1.9%</b>	<b>0.1%</b>	<b>1.1%</b>	<b>1.6%</b>	<b>1.3%</b>	<b>1.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	-5.2%	-11.2%	n.s.	n.s.	n.s.	n.s.
Gas	0	1	1	0	0	0	1	10.0%	1.9%	-10.0%	-2.5%	0.1%	8.6%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Waste	1	2	2	0	0	0	7	8.1%	3.2%	n.s.	n.s.	n.s.	n.s.
of which CCS	0	0	0	0	0	0	6	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Nuclear	24	26	26	27	35	39	31	1.1%	0.0%	0.3%	2.6%	1.0%	-2.4%
Hydro	31	38	38	39	39	39	39	2.1%	-0.1%	0.4%	0.0%	0.0%	0.0%
Wind	0	0	0	6	9	14	21	n.s.	42.0%	50.2%	4.9%	4.4%	3.9%
Solar	0	0	0	3	4	8	12	21.3%	22.0%	35.9%	5.3%	5.8%	4.6%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.9%	17.3%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>16</b>	<b>20</b>	<b>20</b>	<b>28</b>	<b>34</b>	<b>42</b>	<b>46</b>	<b>1.7%</b>	<b>0.1%</b>	<b>3.6%</b>	<b>1.8%</b>	<b>2.3%</b>	<b>0.9%</b>
Coal	0	0	0	0	0	1	1	n.s.	n.s.	13.3%	3.7%	3.7%	0.5%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	19.3%	3.6%
Oil	0	0	0	0	0	0	0	-6.1%	13.0%	3.3%	2.6%	0.5%	0.0%
Gas	0	0	0	0	1	1	1	8.7%	2.0%	4.3%	4.4%	2.1%	-1.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	24.7%	9.4%
Biomass & Waste	0	0	0	3	4	5	5	7.0%	-3.5%	22.6%	3.5%	2.1%	1.3%
of which CCS	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	n.s.	22.1%
Nuclear	3	3	3	4	5	5	4	0.8%	0.2%	0.8%	2.6%	1.0%	-2.7%
Hydro	13	16	15	16	16	16	16	1.8%	0.0%	0.2%	0.0%	0.0%	0.0%
Wind	0	0	0	3	4	8	9	n.s.	31.2%	53.1%	4.0%	6.2%	1.0%
Solar	0	0	0	2	4	7	11	21.3%	22.0%	35.9%	5.3%	6.0%	4.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.3%	16.7%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>19</b>	<b>19</b>	<b>21</b>	<b>20</b>	<b>19</b>	<b>17</b>	<b>15</b>	<b>0.3%</b>	<b>0.7%</b>	<b>-0.2%</b>	<b>-0.8%</b>	<b>-0.9%</b>	<b>-1.4%</b>
Coal	0	0	0	0	0	0	0	-8.9%	0.5%	6.7%	0.9%	-4.9%	-7.1%
Oil	12	11	11	10	6	4	1	-0.4%	-0.3%	-1.0%	-4.0%	-5.1%	-9.5%
Gas	1	2	3	3	3	2	1	3.6%	2.3%	-0.1%	-0.1%	-2.1%	-6.5%
Electricity	4	5	5	5	6	7	8	1.2%	1.3%	0.3%	1.8%	1.4%	1.1%
Heat	0	0	1	1	1	2	2	3.0%	5.0%	1.7%	4.0%	2.9%	1.6%
Biomass & Other	1	1	1	1	2	2	2	0.6%	2.7%	1.5%	2.1%	1.7%	0.9%
Share of Renewables <sup>3</sup> (%)	19%	22%	22%	27%	38%	52%	80%	1.5%	0.1%	2.0%	3.6%	3.3%	4.3%
<b>Industry (incl. non-energy use)</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>0.9%</b>	<b>0.1%</b>	<b>0.3%</b>	<b>0.0%</b>	<b>-0.9%</b>	<b>-1.3%</b>
Coal	0	0	0	0	0	0	0	-9.1%	0.4%	7.1%	1.0%	-4.8%	-7.1%
Oil	1	1	1	1	1	0	0	0.3%	-2.0%	-2.6%	-2.6%	-4.2%	-7.6%
Gas	1	1	1	1	1	1	0	2.3%	2.0%	1.2%	-1.1%	-3.7%	-6.7%
Electricity	1	2	2	2	2	2	2	0.5%	0.6%	0.0%	0.6%	0.3%	0.0%
Heat	0	0	0	0	0	0	0	10.4%	1.9%	-0.4%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	0	0	1	1	1	1	7.5%	0.1%	3.0%	2.5%	2.4%	1.2%
<b>Buildings</b>	<b>9</b>	<b>9</b>	<b>10</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>7</b>	<b>-0.5%</b>	<b>1.3%</b>	<b>-1.8%</b>	<b>-0.4%</b>	<b>-0.3%</b>	<b>-0.6%</b>
Coal	0	0	0	0	0	0	0	-4.6%	2.2%	-3.6%	-14.2%	n.s.	n.s.
Oil	5	4	4	2	1	1	0	-2.3%	-0.6%	-5.4%	-4.9%	-6.8%	-12.1%
Gas	1	1	2	2	1	1	0	3.8%	2.9%	-1.3%	-1.8%	-3.5%	-10.4%
Electricity	2	3	3	3	4	4	4	1.7%	1.7%	0.3%	1.1%	1.2%	0.9%
Heat	0	0	1	1	1	1	2	0.8%	6.3%	2.3%	4.8%	3.3%	1.7%
Biomass & Other	1	1	1	1	1	1	1	-3.0%	4.5%	-0.1%	0.2%	-0.2%	-1.3%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.0%</b>	<b>-5.2%</b>	<b>0.9%</b>	<b>0.9%</b>	<b>0.9%</b>	<b>0.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Gas	0	0	0	0	0	0	0	n.s.	-16.9%	4.5%	-1.9%	-2.9%	-3.0%
Electricity	0	0	0	0	0	0	0	1.2%	0.1%	0.4%	1.4%	1.3%	1.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	40.5%	-5.0%	-0.1%	1.7%	1.5%	1.0%
<b>Transport</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>1.2%</b>	<b>0.3%</b>	<b>1.7%</b>	<b>-1.8%</b>	<b>-1.8%</b>	<b>-3.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	5	6	6	7	4	3	1	1.3%	0.2%	1.5%	-3.9%	-4.7%	-9.3%
Gas	0	0	0	0	0	1	0	n.s.	n.s.	16.9%	17.9%	3.5%	-2.2%
Electricity	0	0	0	0	1	1	2	0.3%	1.8%	1.8%	9.9%	4.0%	2.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	1	n.s.	n.s.	23.0%	12.0%	5.4%	3.8%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>0</b>	<b>-1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>3.7%</b>	<b>3.1%</b>	<b>5.0%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Other Balkans	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	24	23	23	22	21	20	19	-0.5%	-0.3%	-0.2%	-0.3%	-0.6%	-0.7%
GDP per capita (ppp, k\$'05)	5	4	7	8	11	15	20	-0.9%	4.1%	1.9%	3.2%	3.6%	2.8%
GDP per capita (mer, k\$'05)	0	2	3	3	5	7	9	14.0%	4.6%	1.9%	3.2%	3.6%	2.8%
Share Value Added - Agriculture (%)	17	16	12	11	9	8	7	-0.5%	-2.9%	-1.1%	-1.7%	-1.4%	-0.8%
Share Value Added - Industry (%)	46	25	24	22	21	20	19	-5.9%	-0.2%	-1.0%	-0.3%	-0.4%	-0.5%
Share Value Added - Services (%)	37	59	64	67	69	72	73	4.7%	0.8%	0.6%	0.3%	0.3%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	18	23	-6.5%	7.4%	-4.3%	1.5%	2.3%	2.9%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	18	21	30	38	49	38	33	1.4%	3.8%	2.3%	2.5%	-2.4%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	129	76	120	122	93	47	9	-5.2%	4.7%	0.2%	-2.7%	-6.6%	-15.2%
Total GHG (excl. sinks)	130	95	121	123	96	58	22	-3.1%	2.5%	0.2%	-2.5%	-4.9%	-9.1%
Total GHG (energy, industry, agriculture)	129	93	120	118	90	44	12	-3.3%	2.6%	-0.2%	-2.7%	-7.0%	-12.0%
CO <sub>2</sub>	102	72	90	88	69	26	-4	-3.4%	2.3%	-0.3%	-2.3%	-9.4%	n.s.
CH <sub>4</sub>	17	12	11	11	8	6	3	-3.5%	-0.7%	-0.5%	-2.8%	-3.4%	-5.3%
N <sub>2</sub> O	9	6	10	11	10	9	9	-4.4%	5.4%	0.6%	-0.3%	-1.0%	0.1%
F gases	1	3	9	10	3	3	4	8.5%	11.5%	0.4%	-11.8%	1.5%	1.6%
Total GHG from Energy and Industry	113	81	106	103	76	31	1	-3.3%	2.7%	-0.3%	-3.0%	-8.4%	-30.7%
CO <sub>2</sub> Emissions from Fuel Comb.	97	70	86	84	65	22	-6	-3.3%	2.1%	-0.3%	-2.5%	-10.2%	n.s.
Power generation/District heating	52	47	52	52	35	-1	-18	-1.0%	1.1%	-0.1%	-3.8%	n.s.	n.s.
Industry	17	8	10	9	8	6	3	-6.9%	1.6%	-0.5%	-1.1%	-3.3%	-5.5%
Buildings	14	5	6	4	3	2	0	-10.3%	1.6%	-2.6%	-3.0%	-6.6%	-11.7%
Agriculture	0	1	1	1	1	1	0	9.7%	-4.7%	4.5%	-0.9%	-3.9%	-4.1%
Transport	8	6	13	12	11	10	6	-2.4%	7.2%	-0.4%	-0.9%	-1.4%	-4.9%
Other	6	2	5	5	6	5	2	-7.9%	7.3%	-0.6%	2.7%	-2.4%	-8.7%
CO <sub>2</sub> captured (CCS)	0	0	0	0	2	20	27	n.s.	n.s.	n.s.	n.s.	27.4%	3.1%
Coal	0	0	0	0	2	13	5	n.s.	n.s.	n.s.	n.s.	23.0%	-8.9%
Gas	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	37.3%	5.5%
Biomass	0	0	0	0	0	6	20	n.s.	n.s.	n.s.	n.s.	n.s.	13.7%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	23	20	22	13	15	18	19	-1.3%	1.1%	-5.4%	1.4%	2.0%	0.8%
Coal	17	14	15	4	3	2	1	-1.5%	0.6%	-12.7%	-1.8%	-3.5%	-5.4%
Oil	2	1	2	2	2	1	0	-5.3%	2.5%	0.3%	-0.6%	-1.7%	-38.0%
Natural gas	1	1	0	1	1	1	1	-1.4%	-6.4%	4.2%	2.2%	-0.4%	-0.2%
Biomass	2	2	2	4	5	7	9	-0.2%	2.1%	7.0%	2.7%	3.0%	2.4%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	15.5%	15.2%
Hydro	1	2	3	2	3	4	4	3.7%	3.9%	-1.4%	2.4%	1.7%	1.3%
Other renewables	0	0	0	0	1	3	4	n.s.	19.8%	30.4%	22.1%	13.3%	3.9%
Net Imports	9	4	9	18	16	10	6						
Coal	-1	-1	0	11	6	2	1						
Oil	7	4	7	6	6	4	3						
Natural gas	3	1	2	2	5	4	3						
Biomass	0	0	0	-1	-1	0	1						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	32	24	31	31	30	28	26	-2.9%	2.8%	-0.1%	-0.2%	-0.8%	-0.8%
Coal	16	13	16	15	9	5	2	-2.1%	1.8%	-0.5%	-4.7%	-6.8%	-8.8%
Oil	9	5	9	8	7	5	3	-6.4%	5.8%	-1.2%	-0.4%	-3.0%	-5.6%
Natural gas	3	2	2	3	5	5	3	-6.0%	1.9%	2.6%	6.9%	-1.1%	-4.1%
Biomass	2	2	2	3	5	7	10	-0.2%	2.3%	4.6%	4.0%	3.7%	3.4%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	15.5%	15.2%
Hydro	1	2	3	2	3	4	4	3.7%	3.9%	-1.4%	2.4%	1.7%	1.3%
Other renewables	0	0	0	0	1	3	4	n.s.	19.8%	30.4%	22.1%	13.3%	3.9%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	32	24	31	31	30	28	26	-2.9%	2.8%	-0.1%	-0.2%	-0.8%	-0.8%
Energy for Power Generation	15	14	16	16	16	15	16	-0.6%	1.6%	0.1%	-0.4%	-0.5%	0.8%
Other Energy Transformation & Losses	1	1	2	2	3	3	2	-2.8%	6.5%	-1.7%	4.5%	-0.4%	-0.8%
Final consumption	21	13	19	19	20	20	18	-4.4%	3.6%	0.2%	0.2%	-0.1%	-0.8%
Steel, Non-Met. Minerals and Chem.	0	1	3	2	2	1	1	5.0%	14.4%	-1.6%	-2.2%	-3.7%	-2.8%
Other Industry	7	3	2	2	3	3	3	-8.3%	-3.5%	1.9%	1.3%	1.1%	0.5%
Non-Energy Use	2	0	1	1	1	1	1	-13.4%	10.4%	-1.9%	0.3%	-0.3%	-2.3%
Residential	4	5	6	6	7	7	6	1.0%	1.7%	1.2%	0.4%	0.0%	-0.7%
Services	4	2	2	2	2	2	2	-9.8%	2.7%	-1.0%	0.6%	0.6%	0.5%
Agriculture	0	0	0	0	0	0	1	11.2%	-3.1%	3.7%	1.0%	1.1%	0.9%
Road	3	2	5	5	5	5	4	-1.1%	6.9%	0.1%	0.1%	-0.1%	-1.9%
Rail	0	0	0	0	0	0	0	2.1%	18.1%	-4.6%	0.7%	0.6%	0.2%
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other Transport	0	0	0	0	0	0	0	n.s.	4.8%	3.8%	0.9%	-1.5%	-2.6%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Other Balkans	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>13</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>12</b>	<b>8</b>	<b>8</b>	<b>-1.1%</b>	<b>1.1%</b>	<b>0.3%</b>	<b>-1.6%</b>	<b>-3.3%</b>	<b>-0.8%</b>
Coal	12	11	13	13	8	4	1	-0.4%	1.1%	-0.2%	-5.0%	-7.0%	-11.0%
Oil	1	0	0	0	1	0	0	-12.5%	-2.9%	-7.7%	22.7%	-11.6%	n.s.
Gas	0	0	0	1	2	1	1	-7.4%	7.7%	10.1%	12.9%	-4.3%	-4.9%
Biomass & Waste	0	0	0	0	1	3	6	n.s.	n.s.	n.s.	13.5%	8.8%	6.1%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>65</b>	<b>59</b>	<b>79</b>	<b>85</b>	<b>95</b>	<b>109</b>	<b>127</b>	<b>-0.9%</b>	<b>3.0%</b>	<b>0.8%</b>	<b>1.1%</b>	<b>1.4%</b>	<b>1.6%</b>
Coal	44	35	45	51	34	17	5	-2.3%	2.6%	1.2%	-4.0%	-6.7%	-10.7%
of which CCS	0	0	0	0	2	15	5	n.s.	n.s.	n.s.	n.s.	22.4%	-9.8%
Oil	3	1	0	0	3	1	0	-11.9%	-12.4%	5.2%	22.6%	-11.5%	n.s.
Gas	1	0	0	3	9	7	5	-11.4%	0.3%	21.9%	12.3%	-2.6%	-3.9%
of which CCS	0	0	0	0	0	2	4	n.s.	n.s.	n.s.	n.s.	44.2%	6.2%
Biomass & Waste	0	0	0	2	6	15	29	n.s.	n.s.	n.s.	13.9%	9.7%	6.9%
of which CCS	0	0	0	0	0	6	23	n.s.	n.s.	n.s.	n.s.	n.s.	13.6%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	16	23	34	29	37	44	50	3.7%	3.9%	-1.4%	2.4%	1.7%	1.3%
Wind	0	0	0	0	4	15	23	n.s.	n.s.	n.s.	25.4%	14.4%	4.2%
Solar	0	0	0	0	2	10	15	n.s.	n.s.	n.s.	29.7%	16.9%	4.3%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	20.2%	14.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>32</b>	<b>13</b>	<b>14</b>	<b>20</b>	<b>24</b>	<b>37</b>	<b>44</b>	<b>-8.7%</b>	<b>0.6%</b>	<b>4.1%</b>	<b>1.8%</b>	<b>4.5%</b>	<b>1.6%</b>
Coal	27	8	8	12	10	9	5	-11.3%	0.3%	3.3%	-1.6%	-0.6%	-6.9%
of which CCS	0	0	0	0	0	2	3	n.s.	n.s.	n.s.	n.s.	25.2%	1.2%
Oil	3	1	1	1	1	1	1	-16.3%	1.7%	5.2%	-0.7%	0.0%	1.4%
Gas	1	0	0	1	2	2	3	-17.7%	2.2%	18.6%	4.2%	1.7%	0.3%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	44.7%	8.9%
Biomass & Waste	0	0	0	0	1	2	5	n.s.	n.s.	n.s.	8.0%	8.4%	7.9%
of which CCS	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	n.s.	n.s.	14.6%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	4	4	5	7	8	9	n.s.	0.9%	2.5%	2.4%	1.7%	1.3%
Wind	0	0	0	0	2	6	9	n.s.	n.s.	n.s.	25.1%	14.3%	4.1%
Solar	0	0	0	0	2	8	12	n.s.	n.s.	n.s.	29.7%	16.8%	4.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	19.6%	14.0%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>21</b>	<b>13</b>	<b>19</b>	<b>19</b>	<b>20</b>	<b>20</b>	<b>18</b>	<b>-4.4%</b>	<b>3.6%</b>	<b>0.2%</b>	<b>0.2%</b>	<b>-0.1%</b>	<b>-0.8%</b>
Coal	4	2	2	2	1	0	0	-7.1%	1.2%	-1.8%	-3.3%	-8.4%	-4.7%
Oil	8	4	8	7	6	5	3	-6.1%	6.3%	-0.6%	-1.4%	-2.2%	-4.9%
Gas	3	1	1	1	2	2	1	-7.6%	0.0%	0.3%	2.8%	1.4%	-3.7%
Electricity	4	4	5	5	6	7	8	-0.8%	2.5%	0.7%	1.2%	1.6%	1.6%
Heat	1	1	1	1	1	2	2	-1.9%	5.2%	0.2%	2.8%	2.1%	-0.3%
Biomass & Other	2	2	2	3	3	3	3	-0.2%	2.2%	3.0%	1.2%	0.5%	0.4%
Share of Renewables <sup>3</sup> (%)	15%	26%	26%	28%	39%	59%	82%	5.2%	0.2%	0.6%	3.3%	4.3%	3.5%
<b>Industry (incl. non-energy use)</b>	<b>9</b>	<b>4</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>-7.9%</b>	<b>3.7%</b>	<b>-0.3%</b>	<b>-0.1%</b>	<b>-0.5%</b>	<b>-0.7%</b>
Coal	1	1	1	1	1	0	0	-2.4%	1.3%	-0.5%	-2.0%	-7.4%	-4.3%
Oil	4	1	2	2	1	1	1	-15.1%	7.7%	-0.8%	-1.0%	-2.2%	-3.9%
Gas	1	1	1	1	1	1	1	-2.4%	-0.6%	-1.1%	1.3%	3.1%	-2.2%
Electricity	2	1	1	2	2	2	2	-7.8%	5.3%	1.1%	1.0%	1.1%	1.6%
Heat	0	0	0	0	0	0	0	-6.1%	9.0%	-2.6%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	0	0	0	0	0	0	n.s.	-3.4%	6.6%	1.1%	0.3%	5.2%
<b>Buildings</b>	<b>9</b>	<b>6</b>	<b>8</b>	<b>8</b>	<b>9</b>	<b>9</b>	<b>8</b>	<b>-3.1%</b>	<b>2.0%</b>	<b>0.6%</b>	<b>0.4%</b>	<b>0.1%</b>	<b>-0.4%</b>
Coal	2	1	1	0	0	0	0	-12.7%	2.2%	-4.7%	-8.3%	-17.7%	-17.9%
Oil	1	1	1	0	0	0	0	-1.0%	1.1%	-2.9%	-3.6%	-7.1%	-11.4%
Gas	2	0	0	0	1	0	0	-14.8%	1.1%	2.6%	2.3%	-3.5%	-11.5%
Electricity	2	3	3	4	4	4	5	3.1%	1.5%	0.5%	0.5%	1.1%	1.2%
Heat	0	0	1	1	1	1	1	0.0%	3.7%	1.5%	3.7%	2.6%	-0.3%
Biomass & Other	2	2	2	3	3	3	2	-1.2%	2.8%	2.5%	0.4%	-0.5%	-1.8%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>11.2%</b>	<b>-3.1%</b>	<b>3.7%</b>	<b>1.0%</b>	<b>1.1%</b>	<b>0.9%</b>
Coal	0	0	0	0	0	0	0	2.3%	-29.6%	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	16.2%	-2.0%	4.8%	-0.9%	-3.9%	-4.1%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	1.0%	-0.5%	-2.6%	-2.8%
Electricity	0	0	0	0	0	0	0	5.0%	6.0%	-0.7%	4.3%	5.0%	3.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	-13.5%	10.7%	7.1%	8.1%	3.0%
<b>Transport</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>-1.0%</b>	<b>7.3%</b>	<b>-0.1%</b>	<b>0.2%</b>	<b>-0.1%</b>	<b>-1.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	2	5	5	4	4	2	-0.9%	7.3%	-0.4%	-1.3%	-1.8%	-5.1%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	18.6%	19.1%	4.3%	-3.2%
Electricity	0	0	0	0	0	1	1	-5.5%	3.9%	8.7%	15.9%	6.6%	3.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	15.6%	6.3%	6.3%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>-2.8%</b>	<b>6.5%</b>	<b>-1.7%</b>	<b>4.5%</b>	<b>-0.4%</b>	<b>-0.8%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Russia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	148	146	143	143	139	133	129	-0.1%	-0.2%	0.0%	-0.3%	-0.4%	-0.3%
GDP per capita (ppp, k\$'05)	13	9	14	16	20	24	25	-3.8%	5.1%	1.1%	2.4%	1.8%	0.4%
GDP per capita (mer, k\$'05)	6	4	6	7	9	10	11	-3.8%	5.1%	0.9%	2.4%	1.8%	0.4%
Share Value Added - Agriculture (%)	17	6	4	4	4	3	3	-9.0%	-5.0%	-0.1%	-0.7%	-0.4%	-0.1%
Share Value Added - Industry (%)	48	38	35	35	33	32	32	-2.4%	-0.9%	0.0%	-0.4%	-0.4%	-0.1%
Share Value Added - Services (%)	35	56	61	62	63	64	65	4.7%	1.0%	0.0%	0.2%	0.2%	0.0%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	18	23	-6.5%	7.4%	-4.3%	1.5%	2.3%	2.9%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	18	21	30	38	49	38	33	1.4%	3.8%	2.3%	2.5%	-2.4%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	3 486	1 702	1 699	1 577	1 308	710	328	-6.9%	0.0%	-0.7%	-1.9%	-5.9%	-7.4%
Total GHG (excl. sinks)	3 486	2 161	2 318	2 013	1 607	839	428	-4.7%	0.7%	-1.4%	-2.2%	-6.3%	-6.5%
Total GHG (energy, industry, agriculture)	3 359	2 145	2 305	2 009	1 607	839	323	-4.4%	0.7%	-1.4%	-2.2%	-6.3%	-9.1%
CO <sub>2</sub>	2 476	1 550	1 650	1 481	1 227	571	160	-4.6%	0.6%	-1.1%	-1.9%	-7.4%	-11.9%
CH <sub>4</sub>	593	435	491	353	214	129	53	-3.1%	1.2%	-3.3%	-4.9%	-5.0%	-8.5%
N <sub>2</sub> O	248	131	150	159	155	128	100	-6.2%	1.3%	0.6%	-0.3%	-1.9%	-2.5%
F gases	41	29	14	17	12	11	11	-3.5%	-6.8%	1.6%	-3.4%	-1.0%	0.0%
Total GHG from Energy and Industry	3 036	1 992	2 164	1 856	1 452	709	223	-4.1%	0.8%	-1.5%	-2.4%	-6.9%	-10.9%
CO <sub>2</sub> Emissions from Fuel Comb.	2 343	1 474	1 545	1 383	1 139	512	135	-4.5%	0.5%	-1.1%	-1.9%	-7.7%	-12.5%
Power generation/District heating	795	586	623	509	360	41	-80	-3.0%	0.6%	-2.0%	-3.4%	-19.5%	n.s.
Industry	272	196	214	215	201	128	59	-3.2%	0.9%	0.1%	-0.7%	-4.4%	-7.5%
Buildings	336	170	137	99	72	22	6	-6.6%	-2.1%	-3.2%	-3.1%	-11.0%	-13.0%
Agriculture	49	21	14	13	12	8	5	-8.3%	-4.1%	-0.1%	-1.0%	-4.2%	-4.7%
Transport	252	112	157	187	183	136	61	-7.8%	3.4%	1.8%	-0.2%	-2.9%	-7.7%
Other	640	389	400	359	311	176	85	-4.9%	0.3%	-1.1%	-1.4%	-5.6%	-7.0%
CO <sub>2</sub> captured (CCS)	0	0	0	0	16	143	253	n.s.	n.s.	n.s.	n.s.	24.2%	5.8%
Coal	0	0	0	0	7	52	50	n.s.	n.s.	n.s.	n.s.	22.8%	-0.3%
Gas	0	0	0	0	10	60	81	n.s.	n.s.	n.s.	n.s.	19.9%	3.0%
Biomass	0	0	0	0	0	32	122	n.s.	n.s.	n.s.	7.4%	n.s.	14.4%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	1 232	952	1 237	1 247	1 369	1 190	913	-2.5%	2.7%	0.1%	0.9%	-1.4%	-2.6%
Coal	177	138	174	198	202	133	82	-2.5%	2.4%	1.3%	0.2%	-4.1%	-4.7%
Oil	510	325	511	500	493	401	240	-4.4%	4.6%	-0.2%	-0.2%	-2.0%	-5.0%
Natural gas	491	436	488	472	560	480	378	-1.2%	1.1%	-0.3%	1.7%	-1.5%	-2.4%
Biomass	8	5	4	12	30	57	100	-5.5%	-0.9%	11.1%	9.4%	6.6%	5.7%
Nuclear <sup>1</sup>	31	35	45	48	63	84	68	1.0%	2.7%	0.6%	2.8%	3.0%	-2.1%
Hydro	14	14	14	16	18	20	20	0.0%	0.2%	0.9%	1.2%	1.1%	0.2%
Other renewables	0	0	0	1	4	14	25	7.6%	24.2%	10.0%	12.2%	14.7%	5.7%
Net Imports	- 338	- 322	- 528	- 603	- 764	- 727	- 534						
Coal	18	- 5	- 51	- 57	- 102	- 84	- 50						
Oil	- 252	- 199	- 371	- 345	- 341	- 289	- 171						
Natural gas	- 103	- 117	- 104	- 194	- 310	- 343	- 294						
Biomass	0	0	0	- 5	- 8	- 8	- 12						
Biofuels	0	0	0	- 1	- 2	- 3	- 5						
Electricity	- 1	- 1	- 2	- 1	- 1	- 1	- 1						
Primary Energy Demand <sup>2</sup>	894	630	710	644	605	463	378	-3.4%	1.2%	-1.0%	-0.6%	-2.6%	-2.0%
Coal	195	133	123	140	99	50	32	-3.8%	-0.7%	1.3%	-3.4%	-6.7%	-4.4%
Oil	258	126	140	155	152	112	69	-6.9%	1.1%	1.0%	-0.2%	-3.0%	-4.7%
Natural gas	388	319	384	278	250	137	83	-1.9%	1.9%	-3.2%	-1.1%	-5.8%	-4.9%
Biomass	8	5	4	8	23	50	87	-5.5%	-0.9%	5.8%	11.6%	8.2%	5.8%
Nuclear <sup>1</sup>	31	35	45	48	63	84	68	1.0%	2.7%	0.6%	2.8%	3.0%	-2.1%
Hydro	14	14	14	16	18	20	20	0.0%	0.2%	0.9%	1.2%	1.1%	0.2%
Other renewables	0	0	0	1	4	14	25	7.6%	24.2%	10.0%	12.2%	14.7%	5.7%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	894	630	710	644	605	463	378	-3.4%	1.2%	-1.0%	-0.6%	-2.6%	-2.0%
Energy for Power Generation	325	252	286	240	225	199	200	-2.5%	1.2%	-1.7%	-0.7%	-1.2%	0.1%
Other Energy Transformation & Losses	237	165	174	155	143	94	70	-3.6%	0.5%	-1.1%	-0.8%	-4.1%	-2.9%
Final consumption	603	400	425	413	406	336	263	-4.0%	0.6%	-0.3%	-0.2%	-1.9%	-2.4%
Steel, Non-Met. Minerals and Chem.	102	78	91	92	91	70	55	-2.7%	1.6%	0.1%	-0.1%	-2.6%	-2.4%
Other Industry	128	65	52	53	51	46	44	-6.5%	-2.2%	0.1%	-0.4%	-1.0%	-0.5%
Non-Energy Use	40	36	66	67	68	59	44	-1.0%	6.2%	0.1%	0.2%	-1.4%	-2.8%
Residential	168	140	111	96	84	62	44	-1.8%	-2.3%	-1.5%	-1.3%	-3.1%	-3.3%
Services	62	25	37	33	36	32	27	-8.7%	3.9%	-1.1%	0.9%	-1.2%	-1.8%
Agriculture	22	9	6	6	7	7	7	-8.3%	-4.4%	0.0%	1.0%	0.8%	0.4%
Road	52	34	48	52	54	46	31	-4.1%	3.4%	0.7%	0.4%	-1.4%	-4.1%
Rail	12	5	7	7	7	7	7	-7.6%	2.1%	0.5%	0.3%	-0.2%	-0.8%
Aviation	9	5	5	6	6	5	3	-6.9%	1.5%	1.3%	0.5%	-1.8%	-4.2%
Other Transport	7	1	1	2	2	1	1	-14.7%	-1.4%	6.2%	-0.2%	-3.6%	-4.8%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Russia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>279</b>	<b>204</b>	<b>226</b>	<b>176</b>	<b>140</b>	<b>80</b>	<b>87</b>	<b>-3.1%</b>	<b>1.0%</b>	<b>-2.5%</b>	<b>-2.2%</b>	<b>-5.4%</b>	<b>0.8%</b>
Coal	63	63	59	63	33	13	11	0.0%	-0.6%	0.6%	-6.4%	-9.1%	-1.4%
Oil	46	12	4	2	6	0	0	-12.6%	-10.2%	-9.0%	15.2%	-28.8%	n.s.
Gas	170	127	160	108	94	47	31	-2.9%	2.4%	-3.8%	-1.4%	-6.8%	-3.9%
Biomass & Waste	0	2	2	3	7	21	44	29.4%	1.7%	2.9%	10.1%	11.9%	8.0%
Other	0	0	0	0	0	0	0	7.6%	24.2%	8.3%	4.1%	1.4%	1.1%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>1 082</b>	<b>878</b>	<b>1 038</b>	<b>987</b>	<b>1 062</b>	<b>1 075</b>	<b>1 144</b>	<b>-2.1%</b>	<b>1.7%</b>	<b>-0.5%</b>	<b>0.7%</b>	<b>0.1%</b>	<b>0.6%</b>
Coal	157	176	166	216	129	59	52	1.1%	-0.6%	2.7%	-5.0%	-7.5%	-1.4%
of which CCS	0	0	0	0	7	52	51	n.s.	n.s.	n.s.	n.s.	21.4%	-0.2%
Oil	129	33	9	7	28	1	0	-12.7%	-11.9%	-3.0%	15.1%	-28.6%	n.s.
Gas	512	370	521	390	401	261	194	-3.2%	3.5%	-2.8%	0.3%	-4.2%	-2.9%
of which CCS	0	0	0	0	13	129	172	n.s.	n.s.	n.s.	n.s.	26.3%	2.9%
Biomass & Waste	0	3	3	5	26	93	213	52.6%	0.9%	6.8%	17.2%	13.5%	8.6%
of which CCS	0	0	0	0	0	33	114	n.s.	n.s.	n.s.	n.s.	n.s.	13.1%
Nuclear	118	131	170	181	244	335	272	1.0%	2.7%	0.6%	3.0%	3.2%	-2.1%
Hydro	166	165	168	185	209	234	238	0.0%	0.2%	0.9%	1.2%	1.1%	0.2%
Wind	0	0	0	2	18	59	104	n.s.	25.7%	56.4%	26.7%	12.5%	5.8%
Solar	0	0	0	0	4	29	67	n.s.	n.s.	n.s.	35.9%	20.7%	8.6%
Other	0	0	1	1	2	3	6	7.6%	24.2%	8.3%	4.5%	3.7%	8.1%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>254</b>	<b>211</b>	<b>231</b>	<b>226</b>	<b>233</b>	<b>289</b>	<b>300</b>	<b>-1.9%</b>	<b>0.9%</b>	<b>-0.2%</b>	<b>0.3%</b>	<b>2.2%</b>	<b>0.4%</b>
Coal	42	42	42	42	37	32	9	0.0%	0.0%	-0.1%	-1.3%	-1.4%	-11.5%
of which CCS	0	0	0	0	1	7	9	n.s.	n.s.	n.s.	n.s.	22.1%	2.0%
Oil	121	16	16	18	15	13	12	-18.3%	0.0%	1.3%	-1.7%	-1.4%	-1.1%
Gas	91	88	104	90	78	77	55	-0.3%	1.7%	-1.4%	-1.5%	-0.1%	-3.3%
of which CCS	0	0	0	0	2	17	28	n.s.	n.s.	n.s.	n.s.	27.0%	5.1%
Biomass & Waste	0	1	1	1	4	13	31	36.8%	0.0%	2.8%	16.3%	13.7%	9.1%
of which CCS	0	0	0	0	0	4	15	n.s.	n.s.	n.s.	n.s.	n.s.	13.2%
Nuclear	0	20	23	24	32	43	34	n.s.	1.3%	0.7%	2.8%	3.0%	-2.3%
Hydro	0	44	45	49	56	62	63	n.s.	0.2%	0.9%	1.2%	1.1%	0.2%
Wind	0	0	0	1	8	24	42	n.s.	19.6%	55.1%	26.5%	12.3%	5.6%
Solar	0	0	0	0	4	24	53	n.s.	n.s.	n.s.	36.2%	21.0%	8.5%
Other	0	0	0	0	0	0	1	n.s.	14.6%	6.8%	4.2%	2.6%	8.1%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>603</b>	<b>400</b>	<b>425</b>	<b>413</b>	<b>406</b>	<b>336</b>	<b>263</b>	<b>-4.0%</b>	<b>0.6%</b>	<b>-0.3%</b>	<b>-0.2%</b>	<b>-1.9%</b>	<b>-2.4%</b>
Coal	68	29	28	34	31	16	8	-8.3%	-0.2%	1.8%	-0.8%	-6.3%	-6.5%
Oil	145	91	109	119	112	88	54	-4.6%	1.9%	0.9%	-0.6%	-2.4%	-4.7%
Gas	110	90	110	91	84	51	26	-2.0%	2.0%	-2.0%	-0.8%	-4.9%	-6.7%
Electricity	68	50	60	58	62	63	67	-2.9%	1.8%	-0.4%	0.8%	0.1%	0.6%
Heat	203	137	115	107	104	98	80	-3.9%	-1.8%	-0.7%	-0.2%	-0.6%	-2.0%
Biomass & Other	8	3	2	5	12	20	28	-9.3%	-2.5%	8.3%	8.9%	4.7%	3.5%
Share of Renewables <sup>3</sup> (%)	6%	8%	7%	8%	12%	24%	43%	2.1%	-0.9%	1.3%	4.1%	7.2%	6.1%
<b>Industry (incl. non-energy use)</b>	<b>270</b>	<b>179</b>	<b>210</b>	<b>212</b>	<b>210</b>	<b>175</b>	<b>143</b>	<b>-4.0%</b>	<b>1.6%</b>	<b>0.1%</b>	<b>-1.1%</b>	<b>-1.8%</b>	<b>-2.0%</b>
Coal	28	19	24	31	30	16	8	-3.9%	2.6%	2.6%	-0.4%	-6.1%	-6.4%
Oil	44	36	43	47	45	42	36	-2.0%	1.9%	0.9%	-0.3%	-0.7%	-1.7%
Gas	52	43	66	63	60	40	19	-1.9%	4.5%	-0.5%	-0.5%	-3.9%	-7.1%
Electricity	41	27	28	26	27	27	27	-4.2%	0.5%	-0.8%	0.5%	-0.3%	0.3%
Heat	105	55	48	44	42	41	39	-6.4%	-1.4%	-0.9%	-0.3%	-0.4%	-0.4%
Biomass & Other	0	1	0	1	5	9	13	n.s.	-2.9%	10.0%	15.8%	6.7%	3.4%
<b>Buildings</b>	<b>231</b>	<b>166</b>	<b>148</b>	<b>129</b>	<b>120</b>	<b>94</b>	<b>71</b>	<b>-3.3%</b>	<b>-1.1%</b>	<b>-1.4%</b>	<b>-0.7%</b>	<b>-2.4%</b>	<b>-2.8%</b>
Coal	40	10	4	2	1	0	0	-13.1%	-8.8%	-4.7%	-7.7%	-17.2%	-17.5%
Oil	14	7	6	8	6	2	1	-7.0%	-0.6%	2.5%	-3.9%	-9.8%	-12.0%
Gas	57	47	43	27	21	7	2	-1.9%	-0.8%	-4.7%	-2.3%	-11.1%	-13.3%
Electricity	15	18	26	25	26	24	23	1.7%	3.8%	-0.3%	0.4%	-0.8%	-0.2%
Heat	98	82	67	63	62	58	41	-1.7%	-2.0%	-0.6%	-0.2%	-0.7%	-3.4%
Biomass & Other	7	2	2	4	5	4	4	-10.8%	-2.6%	7.5%	2.7%	-2.9%	2.2%
<b>Agriculture</b>	<b>22</b>	<b>9</b>	<b>6</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>-8.3%</b>	<b>-4.4%</b>	<b>0.0%</b>	<b>1.0%</b>	<b>0.8%</b>	<b>0.4%</b>
Coal	1	0	0	0	0	0	0	-7.1%	-11.5%	-3.9%	-2.8%	-7.5%	-7.5%
Oil	14	6	4	4	3	2	1	-8.7%	-4.2%	-0.1%	-1.0%	-4.4%	-4.8%
Gas	1	1	1	1	1	0	0	-0.8%	0.9%	0.5%	-0.6%	-3.1%	-3.5%
Electricity	6	3	1	1	2	2	3	-7.7%	-6.2%	0.1%	2.5%	2.8%	1.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	0	0	0	1	2	3	-15.8%	1.1%	0.5%	16.6%	10.4%	3.2%
<b>Transport</b>	<b>80</b>	<b>46</b>	<b>61</b>	<b>67</b>	<b>69</b>	<b>60</b>	<b>42</b>	<b>-5.4%</b>	<b>3.0%</b>	<b>0.9%</b>	<b>0.4%</b>	<b>-1.4%</b>	<b>-3.6%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	73	42	56	61	58	41	16	-5.3%	2.8%	0.8%	-0.5%	-3.3%	-8.8%
Gas	1	0	0	0	2	4	4	-23.1%	3.4%	10.6%	21.1%	6.6%	1.1%
Electricity	6	3	5	6	7	10	14	-5.5%	4.5%	0.8%	3.1%	3.5%	2.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	2	4	7	n.s.	n.s.	n.s.	20.5%	9.3%	4.7%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>237</b>	<b>165</b>	<b>174</b>	<b>155</b>	<b>143</b>	<b>94</b>	<b>70</b>	<b>-3.6%</b>	<b>0.5%</b>	<b>-1.1%</b>	<b>-0.8%</b>	<b>-4.1%</b>	<b>-2.9%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Ukraine	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	51	49	46	44	41	38	35	-0.5%	-0.7%	-0.4%	-0.7%	-0.8%	-0.7%
GDP per capita (ppp, k\$'05)	8	4	6	7	10	15	21	-7.5%	5.0%	1.0%	4.1%	3.9%	3.5%
GDP per capita (mer, k\$'05)	3	1	2	2	3	5	7	-7.5%	5.0%	0.7%	4.1%	3.9%	3.5%
Share Value Added - Agriculture (%)	26	17	8	9	7	6	5	-4.0%	-7.0%	0.8%	-2.5%	-1.6%	-1.0%
Share Value Added - Industry (%)	45	36	31	27	27	26	24	-2.0%	-1.5%	-1.4%	-0.2%	-0.4%	-0.5%
Share Value Added - Services (%)	30	47	60	64	66	68	70	4.6%	2.6%	0.6%	0.4%	0.3%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	18	23	-6.5%	7.4%	-4.3%	1.5%	2.3%	2.9%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	18	21	30	38	49	38	33	1.4%	3.8%	2.3%	2.5%	-2.4%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	837	358	330	262	227	129	79	-8.1%	-0.8%	-2.3%	-1.4%	-5.5%	-4.8%
Total GHG (excl. sinks)	907	409	368	287	250	150	99	-7.7%	-1.1%	-2.5%	-1.4%	-5.0%	-4.1%
Total GHG (energy, industry, agriculture)	907	409	368	287	250	150	99	-7.7%	-1.1%	-2.5%	-1.4%	-5.0%	-4.1%
CO <sub>2</sub>	685	290	272	210	190	106	66	-8.2%	-0.6%	-2.6%	-1.0%	-5.6%	-4.7%
CH <sub>4</sub>	162	93	66	45	30	18	10	-5.4%	-3.3%	-3.8%	-4.0%	-4.9%	-5.8%
N <sub>2</sub> O	59	26	29	32	30	25	23	-7.7%	0.9%	0.9%	-0.7%	-1.7%	-1.0%
F gases	0	0	1	1	1	1	1	-5.6%	17.0%	1.1%	-0.9%	0.6%	3.0%
Total GHG from Energy and Industry	803	372	334	249	212	120	73	-7.4%	-1.1%	-2.9%	-1.6%	-5.6%	-4.8%
CO <sub>2</sub> Emissions from Fuel Comb.	647	271	253	192	171	92	59	-8.3%	-0.7%	-2.7%	-1.2%	-6.0%	-4.4%
Power generation/District heating	216	79	94	72	46	3	3	-9.6%	1.8%	-2.6%	-4.4%	-22.8%	-1.3%
Industry	133	48	41	35	47	36	24	-9.6%	-1.5%	-1.7%	3.0%	-2.7%	-4.1%
Buildings	60	44	37	25	20	9	2	-3.0%	-1.8%	-3.7%	-2.5%	-7.4%	-12.2%
Agriculture	23	3	4	4	4	3	2	-17.2%	2.4%	-0.5%	-0.8%	-3.9%	-3.9%
Transport	53	17	30	26	26	23	13	-10.6%	5.5%	-1.4%	0.1%	-1.3%	-5.5%
Other	161	78	47	29	28	18	15	-7.0%	-5.1%	-4.5%	-0.5%	-4.4%	-1.8%
CO <sub>2</sub> captured (CCS)	0	0	0	0	2	20	37	n.s.	n.s.	n.s.	n.s.	23.3%	6.5%
Coal	0	0	0	0	2	15	22	n.s.	n.s.	n.s.	n.s.	21.8%	3.8%
Gas	0	0	0	0	0	3	9	n.s.	n.s.	n.s.	n.s.	30.0%	11.0%
Biomass	0	0	0	0	0	1	5	n.s.	n.s.	n.s.	35.8%	38.1%	18.4%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	109	73	80	82	89	88	77	-3.9%	0.9%	0.1%	0.9%	-0.1%	-1.3%
Coal	62	34	35	36	27	12	2	-5.7%	0.3%	0.1%	-2.7%	-7.8%	-16.5%
Oil	5	4	4	4	4	3	2	-3.4%	-0.4%	0.6%	-0.3%	-1.7%	-2.5%
Natural gas	21	13	15	15	16	16	15	-4.5%	1.4%	0.1%	0.6%	-0.4%	-0.7%
Biomass	0	0	1	1	2	2	3	-2.2%	18.6%	-0.6%	2.9%	3.5%	2.9%
Nuclear <sup>1</sup>	20	20	24	23	37	49	46	0.2%	1.4%	-0.1%	4.7%	2.8%	-0.5%
Hydro	1	1	1	1	1	1	1	0.7%	1.4%	0.1%	1.5%	0.3%	0.4%
Other renewables	0	0	0	1	2	5	7	n.s.	n.s.	43.4%	9.4%	10.4%	4.0%
Net Imports	157	61	58	20	31	20	21						
Coal	27	4	9	3	13	9	13						
Oil	62	8	10	7	9	8	5						
Natural gas	71	49	40	11	9	2	3						
Biomass	0	0	0	0	0	1	1						
Biofuels	0	0	0	0	0	0	0						
Electricity	-2	0	0	-1	-1	-1	-1						
Primary Energy Demand <sup>2</sup>	266	134	138	102	120	108	98	-6.6%	0.3%	-3.0%	1.6%	-1.0%	-0.9%
Coal	88	39	44	39	41	22	15	-7.9%	1.4%	-1.2%	0.4%	-6.1%	-3.7%
Oil	67	12	13	11	12	11	7	-15.8%	1.0%	-2.0%	1.4%	-1.2%	-3.9%
Natural gas	92	62	55	26	25	18	18	-3.8%	-1.2%	-7.1%	-0.3%	-3.5%	0.0%
Biomass	0	0	1	1	2	3	4	-2.2%	18.4%	-0.4%	4.0%	5.7%	1.9%
Nuclear <sup>1</sup>	20	20	24	23	37	49	46	0.2%	1.4%	-0.1%	4.7%	2.8%	-0.5%
Hydro	1	1	1	1	1	1	1	0.7%	1.4%	0.1%	1.5%	0.3%	0.4%
Other renewables	0	0	0	1	2	5	7	n.s.	n.s.	43.4%	9.4%	10.4%	4.0%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	266	134	138	102	120	108	98	-6.6%	0.3%	-3.0%	1.6%	-1.0%	-0.9%
Energy for Power Generation	83	45	51	46	55	60	66	-6.0%	1.4%	-1.1%	1.8%	0.9%	0.8%
Other Energy Transformation & Losses	68	37	34	14	15	10	8	-5.9%	-0.8%	-8.7%	0.8%	-3.9%	-1.8%
Final consumption	163	75	77	64	75	66	55	-7.4%	0.2%	-1.8%	1.6%	-1.3%	-1.8%
Steel, Non-Met. Minerals and Chem.	29	14	24	21	31	25	18	-6.9%	5.2%	-1.1%	4.0%	-2.4%	-3.2%
Other Industry	61	24	8	6	7	7	8	-8.8%	-10.4%	-2.7%	0.8%	0.9%	0.9%
Non-Energy Use	6	1	6	4	5	5	4	-15.4%	16.5%	-3.8%	1.8%	0.7%	-1.3%
Residential	32	24	24	19	17	13	9	-2.8%	-0.1%	-2.5%	-1.1%	-2.7%	-2.9%
Services	4	3	5	4	5	5	5	-3.3%	6.4%	-0.3%	1.6%	-0.1%	0.3%
Agriculture	9	2	2	2	2	2	2	-16.6%	1.2%	0.0%	1.2%	1.3%	1.3%
Road	18	6	8	7	8	8	7	-9.6%	2.5%	-1.1%	0.9%	0.1%	-2.0%
Rail	2	1	1	1	1	1	1	-6.9%	-0.5%	-1.1%	1.7%	1.4%	1.1%
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other Transport	1	0	0	0	0	0	0	n.s.	n.s.	-7.1%	1.3%	-1.8%	-2.2%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Ukraine	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>62</b>	<b>23</b>	<b>27</b>	<b>21</b>	<b>15</b>	<b>6</b>	<b>11</b>	<b>-9.3%</b>	<b>1.4%</b>	<b>-2.5%</b>	<b>-3.2%</b>	<b>-9.1%</b>	<b>6.8%</b>
Coal	37	15	20	15	8	3	5	-8.6%	2.9%	-2.9%	-6.3%	-9.3%	4.9%
Oil	13	0	0	1	1	0	0	-30.9%	0.3%	6.5%	7.5%	-16.6%	8.5%
Gas	12	8	6	5	6	2	5	-4.2%	-2.5%	-2.0%	1.1%	-9.0%	7.9%
Biomass & Waste	0	0	0	0	0	0	1	n.s.	n.s.	-6.0%	2.9%	4.1%	11.3%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>299</b>	<b>171</b>	<b>189</b>	<b>187</b>	<b>242</b>	<b>273</b>	<b>317</b>	<b>-5.4%</b>	<b>1.0%</b>	<b>-0.1%</b>	<b>2.6%</b>	<b>1.2%</b>	<b>1.5%</b>
Coal	114	52	70	56	33	13	22	-7.6%	3.0%	-2.1%	-5.1%	-8.7%	5.1%
of which CCS	0	0	0	0	2	12	19	n.s.	n.s.	n.s.	n.s.	20.3%	4.9%
Oil	48	1	1	3	5	1	2	-30.9%	-3.6%	12.3%	7.6%	-16.4%	8.6%
Gas	50	30	16	18	26	14	30	-5.0%	-6.3%	1.5%	3.5%	-5.8%	7.8%
of which CCS	0	0	0	0	1	8	24	n.s.	n.s.	n.s.	n.s.	30.5%	11.3%
Biomass & Waste	0	0	0	0	0	1	5	n.s.	n.s.	3.0%	4.1%	14.5%	13.9%
of which CCS	0	0	0	0	0	1	5	n.s.	n.s.	n.s.	n.s.	n.s.	17.0%
Nuclear	76	77	89	89	144	192	185	0.2%	1.4%	-0.1%	5.0%	2.9%	-0.4%
Hydro	11	11	13	13	15	16	17	0.7%	1.4%	0.1%	1.5%	0.3%	0.4%
Wind	0	0	0	5	10	22	36	n.s.	42.9%	37.3%	7.5%	7.9%	5.0%
Solar	0	0	0	3	8	13	20	n.s.	n.s.	n.s.	9.3%	5.8%	4.1%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	21.0%	17.6%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>80</b>	<b>52</b>	<b>54</b>	<b>41</b>	<b>58</b>	<b>75</b>	<b>80</b>	<b>-4.1%</b>	<b>0.3%</b>	<b>-2.6%</b>	<b>3.4%</b>	<b>2.6%</b>	<b>0.7%</b>
Coal	22	22	22	9	10	10	5	-0.1%	0.0%	-8.1%	0.9%	-0.1%	-6.6%
of which CCS	0	0	0	0	0	2	3	n.s.	n.s.	n.s.	n.s.	22.1%	5.1%
Oil	45	1	1	1	1	1	1	-32.0%	0.0%	-5.9%	7.0%	1.1%	1.1%
Gas	12	14	12	8	8	9	10	1.2%	-1.0%	-4.2%	0.5%	0.4%	1.1%
of which CCS	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	n.s.	32.2%	11.2%
Biomass & Waste	0	0	0	0	0	0	1	n.s.	n.s.	1.9%	-0.5%	13.2%	13.1%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	17.0%
Nuclear	0	11	13	13	21	28	26	n.s.	1.6%	-0.1%	4.8%	2.9%	-0.8%
Hydro	0	5	5	6	7	7	7	n.s.	1.5%	0.5%	1.5%	0.3%	0.4%
Wind	0	0	0	2	4	9	15	n.s.	n.s.	35.8%	7.5%	7.8%	4.9%
Solar	0	0	0	3	6	11	16	n.s.	n.s.	n.s.	9.2%	5.6%	3.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	20.4%	17.0%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>163</b>	<b>75</b>	<b>77</b>	<b>64</b>	<b>75</b>	<b>66</b>	<b>55</b>	<b>-7.4%</b>	<b>0.2%</b>	<b>-1.8%</b>	<b>1.6%</b>	<b>-1.3%</b>	<b>-1.8%</b>
Coal	39	16	15	15	23	12	5	-8.5%	-0.9%	0.4%	4.1%	-6.3%	-7.4%
Oil	43	11	12	11	12	12	8	-13.0%	1.5%	-1.4%	0.9%	-0.1%	-3.9%
Gas	33	26	25	15	14	12	9	-2.6%	-0.2%	-5.0%	-0.9%	-1.6%	-2.5%
Electricity	18	10	11	11	15	17	20	-5.8%	1.7%	0.0%	2.8%	1.3%	1.5%
Heat	31	13	12	10	10	11	10	-8.0%	-0.6%	-2.0%	0.1%	0.7%	-0.6%
Biomass & Other	0	0	1	1	2	3	3	-2.2%	14.7%	4.2%	2.1%	5.3%	-0.8%
Share of Renewables <sup>3</sup> (%)	2%	3%	4%	6%	7%	15%	23%	2.9%	4.7%	3.2%	2.2%	7.5%	4.3%
<b>Industry (incl. non-energy use)</b>	<b>97</b>	<b>40</b>	<b>37</b>	<b>31</b>	<b>43</b>	<b>37</b>	<b>30</b>	<b>-8.5%</b>	<b>-0.6%</b>	<b>-1.8%</b>	<b>3.2%</b>	<b>-1.4%</b>	<b>-2.0%</b>
Coal	30	13	14	14	22	12	5	-7.8%	0.5%	0.5%	4.5%	-6.3%	-7.4%
Oil	15	2	2	2	3	4	4	-16.8%	-0.4%	-2.9%	4.3%	4.4%	-0.3%
Gas	23	12	11	6	6	8	7	-6.5%	-1.2%	-6.1%	1.2%	2.2%	-0.8%
Electricity	13	5	6	5	7	8	9	-8.4%	0.9%	-1.4%	3.2%	1.3%	1.1%
Heat	16	7	5	4	4	4	4	-8.0%	-3.6%	-1.7%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	2.6%	15.7%	19.7%	-4.1%
<b>Buildings</b>	<b>36</b>	<b>27</b>	<b>28</b>	<b>23</b>	<b>22</b>	<b>18</b>	<b>15</b>	<b>-2.9%</b>	<b>0.7%</b>	<b>-2.1%</b>	<b>-0.5%</b>	<b>-2.0%</b>	<b>-1.8%</b>
Coal	8	3	1	1	0	0	0	-9.9%	-13.3%	0.3%	-6.5%	-16.1%	-16.4%
Oil	2	0	0	0	1	1	0	-13.8%	-8.9%	7.1%	7.5%	-0.6%	-10.0%
Gas	10	14	14	9	7	3	1	3.2%	0.5%	-4.3%	-2.7%	-7.9%	-12.7%
Electricity	1	3	5	5	6	7	7	8.5%	3.7%	1.2%	1.8%	0.1%	0.9%
Heat	14	6	8	6	6	7	6	-8.1%	2.1%	-2.2%	0.3%	1.2%	-0.8%
Biomass & Other	0	0	1	1	1	1	0	-2.2%	14.0%	3.6%	-1.4%	-6.8%	-10.2%
<b>Agriculture</b>	<b>9</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>-16.6%</b>	<b>1.2%</b>	<b>0.0%</b>	<b>1.2%</b>	<b>1.3%</b>	<b>1.3%</b>
Coal	1	0	0	0	0	0	0	n.s.	n.s.	-3.9%	-2.8%	-7.5%	-7.5%
Oil	6	1	1	1	1	1	0	-15.7%	1.5%	-0.4%	-0.8%	-3.9%	-4.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	-0.1%	-0.4%	-2.6%	-2.7%
Electricity	2	0	0	0	1	1	1	-15.9%	-4.2%	1.6%	5.3%	5.8%	3.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	1	n.s.	n.s.	2.8%	17.8%	12.0%	4.1%
<b>Transport</b>	<b>21</b>	<b>7</b>	<b>9</b>	<b>8</b>	<b>9</b>	<b>9</b>	<b>8</b>	<b>-9.9%</b>	<b>2.3%</b>	<b>-1.1%</b>	<b>1.0%</b>	<b>0.2%</b>	<b>-1.6%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	-9.8%	0.0%	0.0%	0.0%
Oil	20	7	9	7	7	6	3	-10.3%	2.4%	-1.3%	-0.1%	-1.7%	-6.6%
Gas	0	0	0	0	0	1	1	n.s.	n.s.	0.8%	18.5%	7.4%	4.1%
Electricity	1	1	1	1	1	2	3	-4.7%	0.1%	0.3%	5.0%	4.7%	4.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	14.2%	8.4%	4.5%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>68</b>	<b>37</b>	<b>34</b>	<b>14</b>	<b>15</b>	<b>10</b>	<b>8</b>	<b>-5.9%</b>	<b>-0.8%</b>	<b>-8.7%</b>	<b>0.8%</b>	<b>-3.9%</b>	<b>-1.8%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Other CIS	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	77	81	88	98	105	110	114	0.5%	0.8%	1.1%	0.7%	0.5%	0.3%
GDP per capita (ppp, k\$'05)	5	3	6	10	15	21	27	-4.0%	7.5%	4.3%	4.5%	3.4%	2.4%
GDP per capita (mer, k\$'05)	2	1	2	4	6	8	10	-4.1%	7.4%	4.3%	4.5%	3.4%	2.4%
Share Value Added - Agriculture (%)	20	20	9	7	6	6	5	-0.4%	-7.5%	-2.0%	-1.8%	-0.9%	-0.5%
Share Value Added - Industry (%)	26	35	43	41	40	37	35	2.9%	2.1%	-0.5%	-0.4%	-0.6%	-0.5%
Share Value Added - Services (%)	53	45	48	51	54	57	59	-1.6%	0.6%	0.7%	0.6%	0.5%	0.4%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	18	23	-6.5%	7.4%	-4.3%	1.5%	2.3%	2.9%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	18	21	30	38	49	38	33	1.4%	3.8%	2.3%	2.5%	-2.4%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	941	556	750	958	991	633	332	-5.1%	3.0%	2.5%	0.3%	-4.4%	-6.2%
Total GHG (excl. sinks)	969	598	810	1 012	1 038	674	369	-4.7%	3.1%	2.3%	0.3%	-4.2%	-5.8%
Total GHG (energy, industry, agriculture)	969	596	800	1 002	1 030	666	362	-4.7%	3.0%	2.3%	0.3%	-4.3%	-5.9%
CO <sub>2</sub>	723	417	547	754	808	499	246	-5.4%	2.8%	3.3%	0.7%	-4.7%	-6.8%
CH <sub>4</sub>	174	133	193	183	157	110	63	-2.6%	3.8%	-0.5%	-1.6%	-3.5%	-5.4%
N <sub>2</sub> O	69	45	56	60	60	51	45	-4.2%	2.3%	0.6%	0.0%	-1.6%	-1.4%
F gases	3	1	3	5	5	6	7	-9.0%	10.0%	5.1%	0.9%	1.1%	1.9%
Total GHG from Energy and Industry	843	513	689	889	920	582	297	-4.9%	3.0%	2.6%	0.3%	-4.5%	-6.5%
CO <sub>2</sub> Emissions from Fuel Comb.	688	384	500	687	732	448	223	-5.7%	2.7%	3.2%	0.6%	-4.8%	-6.8%
Power generation/District heating	248	152	165	215	226	80	14	-4.8%	0.8%	2.7%	0.5%	-9.9%	-16.2%
Industry	140	58	88	158	178	110	58	-8.4%	4.2%	6.0%	1.2%	-4.7%	-6.1%
Buildings	159	83	104	127	119	80	31	-6.3%	2.3%	2.0%	-0.6%	-3.9%	-9.0%
Agriculture	13	8	8	9	9	6	4	-4.2%	-0.4%	1.9%	-0.4%	-3.5%	-3.8%
Transport	56	27	41	54	55	50	32	-6.9%	4.1%	2.8%	0.1%	-0.9%	-4.5%
Other	73	55	95	124	145	122	84	-2.7%	5.5%	2.7%	1.6%	-1.7%	-3.7%
CO <sub>2</sub> captured (CCS)	0	0	0	0	19	145	213	n.s.	n.s.	n.s.	n.s.	22.8%	3.9%
Coal	0	0	0	0	8	62	74	n.s.	n.s.	n.s.	n.s.	22.0%	1.8%
Gas	0	0	0	0	10	79	116	n.s.	n.s.	n.s.	n.s.	22.7%	3.9%
Biomass	0	0	0	0	0	4	23	n.s.	n.s.	n.s.	5.8%	n.s.	17.7%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	224	200	316	420	536	492	372	-1.1%	4.7%	2.9%	2.5%	-0.9%	-2.8%
Coal	56	38	53	76	66	34	25	-3.8%	3.3%	3.7%	-1.4%	-6.5%	-3.1%
Oil	52	67	149	199	230	216	140	2.5%	8.3%	2.9%	1.5%	-0.6%	-4.3%
Natural gas	110	88	106	135	223	213	166	-2.2%	1.9%	2.5%	5.1%	-0.5%	-2.4%
Biomass	1	1	2	4	6	7	8	5.2%	0.9%	9.2%	4.0%	2.5%	1.1%
Nuclear <sup>1</sup>	0	1	1	1	3	6	8	n.s.	2.2%	0.2%	14.3%	8.2%	3.0%
Hydro	4	4	5	5	6	6	7	-0.6%	2.3%	-0.4%	1.1%	1.3%	0.5%
Other renewables	0	0	0	0	2	10	19	n.s.	n.s.	54.0%	40.2%	15.4%	6.6%
Net Imports	26	-49	-128	-159	-231	-221	-148						
Coal	-3	-14	-15	-20	-15	-5	-2						
Oil	41	-31	-115	-148	-178	-172	-112						
Natural gas	-14	-5	2	8	-44	-54	-45						
Biomass	0	0	0	2	7	10	12						
Biofuels	0	0	0	0	0	0	0						
Electricity	1	1	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	250	150	188	262	305	271	224	-4.9%	2.3%	3.3%	1.6%	-1.2%	-1.9%
Coal	53	24	38	56	51	29	22	-7.6%	4.8%	3.9%	-0.9%	-5.7%	-2.4%
Oil	94	36	35	51	52	44	27	-9.1%	-0.3%	3.8%	0.3%	-1.7%	-4.6%
Natural gas	96	84	108	143	179	159	121	-1.4%	2.6%	2.9%	2.3%	-1.2%	-2.7%
Biomass	1	1	2	6	12	17	20	5.1%	0.9%	13.4%	8.4%	3.5%	1.4%
Nuclear <sup>1</sup>	0	1	1	1	3	6	8	n.s.	2.2%	0.2%	14.3%	8.2%	3.0%
Hydro	4	4	5	5	6	6	7	-0.6%	2.3%	-0.4%	1.1%	1.3%	0.5%
Other renewables	0	0	0	0	2	10	19	n.s.	n.s.	54.0%	40.2%	15.4%	6.6%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	250	150	188	262	305	271	224	-4.9%	2.3%	3.3%	1.6%	-1.2%	-1.9%
Energy for Power Generation	84	56	63	81	100	102	114	-4.0%	1.1%	2.5%	2.2%	0.2%	1.1%
Other Energy Transformation & Losses	28	22	36	50	63	59	48	-2.1%	4.9%	3.3%	2.3%	-0.7%	-2.0%
Final consumption	189	100	121	170	193	171	132	-6.1%	1.9%	3.5%	1.3%	-1.2%	-2.5%
Steel, Non-Met. Minerals and Chem.	8	6	13	27	40	32	21	-3.4%	8.7%	7.4%	4.1%	-2.4%	-4.0%
Other Industry	51	23	26	35	37	34	29	-7.8%	1.2%	3.3%	0.3%	-0.8%	-1.4%
Non-Energy Use	15	7	6	8	9	9	7	-7.7%	-1.9%	3.7%	1.4%	-0.6%	-2.6%
Residential	14	27	30	38	37	30	22	7.2%	1.0%	2.3%	-0.2%	-2.1%	-3.2%
Services	72	22	25	34	39	32	22	-11.2%	1.4%	3.0%	1.3%	-1.7%	-3.7%
Agriculture	8	5	5	6	7	9	10	-5.1%	-0.4%	2.3%	2.2%	1.8%	1.5%
Road	18	9	14	19	21	22	18	-6.5%	4.4%	3.0%	1.0%	0.4%	-1.9%
Rail	2	1	1	1	2	2	2	-7.3%	1.2%	2.4%	2.1%	1.3%	0.7%
Aviation	1	0	0	1	1	1	1	-1.0%	-1.0%	4.5%	3.6%	1.3%	-1.4%
Other Transport	0	0	0	0	0	0	0	-7.8%	2.9%	4.8%	3.1%	-1.1%	-2.2%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Other CIS	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>80</b>	<b>51</b>	<b>57</b>	<b>75</b>	<b>89</b>	<b>80</b>	<b>81</b>	<b>-4.3%</b>	<b>1.0%</b>	<b>2.8%</b>	<b>1.8%</b>	<b>-1.1%</b>	<b>0.1%</b>
Coal	28	16	19	26	22	16	17	-5.5%	2.0%	3.0%	-1.5%	-3.1%	0.3%
Oil	19	7	1	4	5	2	1	-9.8%	-19.6%	16.9%	2.6%	-6.7%	-9.6%
Gas	32	29	37	43	59	58	55	-1.2%	2.5%	1.6%	3.2%	-0.2%	-0.4%
Biomass & Waste	0	0	0	2	3	4	8	n.s.	n.s.	37.2%	3.8%	1.9%	6.6%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>295</b>	<b>201</b>	<b>256</b>	<b>357</b>	<b>507</b>	<b>594</b>	<b>712</b>	<b>-3.8%</b>	<b>2.4%</b>	<b>3.4%</b>	<b>3.6%</b>	<b>1.6%</b>	<b>1.8%</b>
Coal	73	38	69	94	93	75	78	-6.3%	6.1%	3.1%	-0.2%	-2.1%	0.4%
of which CCS	0	0	0	0	9	60	73	n.s.	n.s.	n.s.	n.s.	20.9%	2.1%
Oil	53	23	2	16	21	10	4	-8.1%	-19.9%	20.5%	2.5%	-6.7%	-9.6%
Gas	116	88	119	181	298	331	338	-2.7%	3.0%	4.3%	5.1%	1.1%	0.2%
of which CCS	0	0	0	0	24	202	304	n.s.	n.s.	n.s.	n.s.	23.8%	4.2%
Biomass & Waste	0	0	0	3	5	16	35	n.s.	n.s.	39.6%	5.6%	13.3%	8.3%
of which CCS	0	0	0	0	0	4	19	n.s.	n.s.	n.s.	n.s.	n.s.	17.6%
Nuclear	0	2	2	3	10	23	30	n.s.	2.2%	0.2%	14.9%	8.3%	2.9%
Hydro	52	49	62	60	66	75	79	-0.6%	2.3%	-0.4%	1.1%	1.3%	0.5%
Wind	0	0	0	1	13	43	82	n.s.	n.s.	51.5%	31.5%	13.0%	6.6%
Solar	0	0	0	0	2	21	62	n.s.	n.s.	n.s.	39.6%	24.5%	11.3%
Other	0	0	0	0	0	1	4	n.s.	n.s.	n.s.	35.9%	26.7%	23.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>88</b>	<b>66</b>	<b>72</b>	<b>71</b>	<b>99</b>	<b>153</b>	<b>185</b>	<b>-2.8%</b>	<b>0.9%</b>	<b>-0.2%</b>	<b>3.3%</b>	<b>4.5%</b>	<b>1.9%</b>
Coal	15	15	15	15	18	20	13	-0.4%	0.3%	-0.1%	1.7%	1.0%	-4.1%
of which CCS	0	0	0	0	1	8	10	n.s.	n.s.	n.s.	n.s.	21.4%	2.4%
Oil	50	7	7	6	4	3	4	-17.6%	-0.4%	-2.2%	-3.7%	-1.2%	0.5%
Gas	23	29	32	33	50	70	59	2.5%	1.2%	0.1%	4.3%	3.6%	-1.8%
of which CCS	0	0	0	0	3	26	41	n.s.	n.s.	n.s.	n.s.	24.3%	4.4%
Biomass & Waste	0	0	1	1	1	2	5	n.s.	n.s.	1.8%	0.7%	12.6%	8.2%
of which CCS	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	n.s.	17.6%
Nuclear	0	0	0	0	2	4	5	n.s.	0.0%	0.1%	14.7%	8.1%	2.7%
Hydro	0	15	17	17	18	21	22	n.s.	1.0%	-0.2%	1.1%	1.3%	0.5%
Wind	0	0	0	0	5	18	33	n.s.	n.s.	50.3%	31.2%	12.8%	6.5%
Solar	0	0	0	0	2	15	45	n.s.	n.s.	n.s.	39.4%	24.7%	11.3%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	26.1%	23.0%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>189</b>	<b>100</b>	<b>121</b>	<b>170</b>	<b>193</b>	<b>171</b>	<b>132</b>	<b>-6.1%</b>	<b>1.9%</b>	<b>3.5%</b>	<b>1.3%</b>	<b>-1.2%</b>	<b>-2.5%</b>
Coal	23	7	17	28	26	10	4	-11.3%	9.3%	4.8%	-0.7%	-8.7%	-8.2%
Oil	60	24	30	39	39	35	22	-8.8%	2.1%	2.7%	0.1%	-1.2%	-4.4%
Gas	53	39	41	60	70	57	30	-2.9%	0.4%	3.9%	1.5%	-2.1%	-6.0%
Electricity	23	13	16	24	33	39	48	-5.0%	2.0%	3.6%	3.6%	1.7%	1.9%
Heat	29	15	15	15	16	18	19	-6.4%	0.0%	0.1%	0.7%	1.3%	0.2%
Biomass & Other	1	1	1	5	9	12	10	5.1%	-0.1%	12.4%	7.4%	2.2%	-2.1%
Share of Renewables <sup>3</sup> (%)	5%	7%	7%	6%	9%	18%	31%	4.3%	-0.6%	-1.7%	4.7%	7.1%	5.6%
<b>Industry (incl. non-energy use)</b>	<b>74</b>	<b>35</b>	<b>44</b>	<b>70</b>	<b>86</b>	<b>74</b>	<b>57</b>	<b>-7.2%</b>	<b>2.4%</b>	<b>4.7%</b>	<b>2.0%</b>	<b>-1.5%</b>	<b>-2.6%</b>
Coal	19	6	12	23	23	10	4	-10.6%	7.0%	6.5%	0.2%	-8.3%	-8.1%
Oil	22	7	6	9	10	10	8	-11.1%	-0.7%	3.3%	1.6%	-0.3%	-2.4%
Gas	12	11	13	23	30	29	19	-1.0%	1.3%	6.1%	2.8%	-0.5%	-4.1%
Electricity	13	6	8	11	16	18	20	-8.1%	3.4%	3.5%	3.8%	1.2%	1.0%
Heat	8	5	5	4	4	4	4	-3.8%	-0.2%	-1.9%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	0	0	0	2	3	2	n.s.	-2.4%	23.1%	17.1%	5.3%	-5.4%
<b>Buildings</b>	<b>86</b>	<b>49</b>	<b>56</b>	<b>72</b>	<b>76</b>	<b>63</b>	<b>44</b>	<b>-5.3%</b>	<b>1.2%</b>	<b>2.6%</b>	<b>0.5%</b>	<b>-1.9%</b>	<b>-3.5%</b>
Coal	5	1	5	5	2	0	0	-14.7%	18.3%	-0.8%	-7.1%	-16.0%	-16.2%
Oil	16	4	6	8	7	6	3	-12.1%	3.6%	2.1%	-1.1%	-1.6%	-6.7%
Gas	39	28	28	36	38	26	9	-3.3%	-0.1%	2.8%	0.5%	-3.9%	-9.7%
Electricity	4	5	6	9	11	12	16	1.8%	1.0%	4.1%	2.5%	1.1%	2.3%
Heat	21	10	10	11	12	14	15	-7.6%	0.2%	1.1%	1.0%	1.8%	0.3%
Biomass & Other	1	1	1	4	6	4	1	4.6%	-0.4%	11.5%	3.6%	-3.3%	-10.2%
<b>Agriculture</b>	<b>8</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>9</b>	<b>10</b>	<b>-5.1%</b>	<b>-0.4%</b>	<b>2.3%</b>	<b>2.2%</b>	<b>1.8%</b>	<b>1.5%</b>
Coal	0	0	0	0	0	0	0	-26.7%	43.6%	-0.7%	-3.2%	-7.5%	-7.5%
Oil	3	2	2	2	2	2	1	-1.8%	-1.8%	2.0%	-0.2%	-3.5%	-3.9%
Gas	1	0	0	0	0	0	0	-17.0%	3.6%	3.8%	0.2%	-2.2%	-2.6%
Electricity	4	2	2	3	4	5	7	-5.6%	-0.4%	2.7%	3.4%	3.0%	2.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	2	8.3%	18.3%	2.6%	19.7%	11.2%	3.8%
<b>Transport</b>	<b>21</b>	<b>11</b>	<b>16</b>	<b>21</b>	<b>24</b>	<b>25</b>	<b>21</b>	<b>-6.4%</b>	<b>4.0%</b>	<b>3.0%</b>	<b>1.2%</b>	<b>0.5%</b>	<b>-1.7%</b>
Coal	0	0	0	0	0	0	0	-9.9%	3.8%	5.4%	0.0%	0.0%	0.0%
Oil	20	10	15	20	19	17	10	-6.2%	3.7%	2.9%	-0.2%	-1.2%	-5.1%
Gas	0	0	0	0	1	2	2	-7.0%	12.3%	1.2%	9.5%	3.9%	1.4%
Electricity	1	0	1	1	2	3	5	-10.3%	6.1%	3.7%	8.3%	4.8%	4.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	2	3	4	n.s.	n.s.	36.3%	19.8%	7.8%	2.7%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>28</b>	<b>22</b>	<b>36</b>	<b>50</b>	<b>63</b>	<b>59</b>	<b>48</b>	<b>-2.1%</b>	<b>4.9%</b>	<b>3.3%</b>	<b>2.3%</b>	<b>-0.7%</b>	<b>-2.0%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Argentina	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	33	37	41	46	49	53	55	1.2%	1.1%	1.0%	0.8%	0.7%	0.5%
GDP per capita (ppp, k\$'05)	7	10	13	15	19	23	27	3.3%	2.7%	1.4%	2.0%	1.9%	1.7%
GDP per capita (mer, k\$'05)	4	5	7	8	10	12	14	3.3%	2.7%	1.4%	2.0%	1.9%	1.7%
Share Value Added - Agriculture (%)	10	6	7	6	5	5	5	-3.8%	1.3%	-2.4%	-0.6%	-0.5%	-0.3%
Share Value Added - Industry (%)	39	33	39	37	36	35	33	-1.7%	1.7%	-0.5%	-0.3%	-0.4%	-0.4%
Share Value Added - Services (%)	52	61	54	57	59	60	62	1.6%	-1.2%	0.6%	0.3%	0.3%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	15	18	23	-4.2%	5.6%	-0.1%	1.4%	2.0%	2.3%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	17	26	20	23	39	35	32	4.7%	-2.5%	1.3%	5.4%	-1.2%	-0.7%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	322	360	394	361	246	108	-8	1.1%	0.9%	-0.9%	-3.7%	-7.9%	n.s.
Total GHG (excl. sinks)	363	408	437	391	283	180	68	1.2%	0.7%	-1.1%	-3.2%	-4.4%	-9.3%
Total GHG (energy, industry, agriculture)	246	289	332	311	283	180	68	1.6%	1.4%	-0.6%	-0.9%	-4.4%	-9.3%
CO <sub>2</sub>	111	154	196	178	176	93	-8	3.4%	2.4%	-1.0%	-0.1%	-6.2%	n.s.
CH <sub>4</sub>	98	97	85	79	60	46	37	-0.2%	-1.2%	-0.7%	-2.7%	-2.7%	-1.9%
N <sub>2</sub> O	35	38	50	53	46	42	37	0.9%	2.9%	0.5%	-1.4%	-1.0%	-1.1%
F gases	2	0	1	1	0	0	1	-19.9%	9.2%	0.9%	-3.4%	0.1%	1.6%
Total GHG from Energy and Industry	137	183	223	198	191	102	-1	3.0%	2.0%	-1.2%	-0.3%	-6.1%	n.s.
CO <sub>2</sub> Emissions from Fuel Comb.	105	147	187	168	165	83	-12	3.4%	2.4%	-1.1%	-0.2%	-6.6%	n.s.
Power generation/District heating	19	30	45	35	40	2	-40	4.7%	4.2%	-2.4%	1.3%	-24.5%	n.s.
Industry	16	29	34	37	37	24	5	6.0%	1.5%	0.8%	0.1%	-4.2%	-14.6%
Buildings	18	20	27	24	21	11	3	1.0%	3.0%	-0.9%	-1.3%	-6.7%	-12.6%
Agriculture	5	8	11	10	9	6	4	5.1%	3.3%	-0.7%	-0.6%	-3.9%	-4.0%
Transport	29	41	44	43	38	30	18	3.7%	0.5%	-0.1%	-1.2%	-2.5%	-4.8%
Other	18	19	27	19	19	10	-3	0.5%	3.7%	-3.7%	0.0%	-5.9%	n.s.
CO <sub>2</sub> captured (CCS)	0	0	0	0	2	32	78	n.s.	n.s.	n.s.	n.s.	30.4%	9.1%
Coal	0	0	0	0	1	13	14	n.s.	n.s.	n.s.	n.s.	25.1%	0.6%
Gas	0	0	0	0	1	6	7	n.s.	n.s.	n.s.	n.s.	21.8%	1.1%
Biomass	0	0	0	0	0	13	57	n.s.	n.s.	n.s.	26.5%	n.s.	15.7%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	46	79	78	47	41	48	66	5.7%	-0.1%	-4.9%	-1.4%	1.6%	3.2%
Coal	0	0	0	0	0	0	0	0.2%	-12.8%	9.6%	5.1%	2.1%	-1.4%
Oil	26	41	35	18	11	0	0	4.9%	-1.6%	-6.4%	-4.7%	n.s.	n.s.
Natural gas	15	31	33	14	9	8	7	7.6%	0.7%	-8.2%	-4.1%	-1.5%	-1.8%
Biomass	2	3	5	8	12	24	39	6.4%	6.4%	4.8%	3.5%	7.3%	5.1%
Nuclear <sup>1</sup>	2	2	2	3	3	6	6	-1.6%	1.5%	3.2%	2.5%	5.9%	0.3%
Hydro	2	2	3	3	3	4	4	4.7%	1.6%	-0.3%	1.7%	1.2%	1.0%
Other renewables	0	0	0	1	2	7	10	n.s.	12.3%	n.s.	5.1%	11.3%	4.2%
Net Imports	0	-17	3	29	40	31	12						
Coal	1	1	2	3	4	5	3						
Oil	-6	-18	-3	7	11	16	9						
Natural gas	4	0	5	22	27	13	4						
Biomass	0	0	0	-2	-2	-3	-3						
Biofuels	0	0	-1	-1	-1	-1	-2						
Electricity	0	0	1	2	2	2	2						
Primary Energy Demand <sup>2</sup>	45	62	81	77	82	79	78	3.2%	2.7%	-0.5%	0.6%	-0.3%	-0.1%
Coal	1	1	2	3	4	5	3	-2.3%	5.8%	3.9%	4.5%	1.6%	-3.7%
Oil	20	23	31	24	22	16	9	1.7%	3.0%	-2.5%	-1.1%	-3.3%	-5.4%
Natural gas	19	30	38	36	37	21	10	4.9%	2.2%	-0.5%	0.2%	-5.3%	-7.0%
Biomass	2	3	5	6	9	21	36	6.4%	6.4%	1.9%	3.9%	8.4%	5.5%
Nuclear <sup>1</sup>	2	2	2	3	3	6	6	-1.6%	1.5%	3.2%	2.5%	5.9%	0.3%
Hydro	2	2	3	3	3	4	4	4.7%	1.6%	-0.3%	1.7%	1.2%	1.0%
Other renewables	0	0	0	1	2	7	10	n.s.	12.3%	n.s.	5.1%	11.3%	4.2%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	45	62	81	77	82	79	78	3.2%	2.7%	-0.5%	0.6%	-0.3%	-0.1%
Energy for Power Generation	11	16	23	21	26	34	42	4.2%	3.4%	-1.0%	2.2%	2.7%	2.4%
Other Energy Transformation & Losses	7	5	12	9	10	8	9	-2.6%	8.5%	-3.2%	0.8%	-1.2%	0.3%
Final consumption	31	47	56	58	61	57	53	4.3%	1.8%	0.4%	0.4%	-0.6%	-0.8%
Steel, Non-Met. Minerals and Chem.	1	3	3	4	3	2	1	13.4%	1.7%	2.2%	-2.3%	-6.0%	-4.3%
Other Industry	8	12	14	14	16	16	16	4.2%	0.8%	0.1%	1.3%	0.2%	0.3%
Non-Energy Use	2	4	5	6	7	6	5	9.1%	0.8%	2.7%	0.9%	-0.3%	-1.9%
Residential	6	9	13	12	12	10	8	3.9%	3.0%	0.0%	-0.5%	-1.9%	-1.7%
Services	3	3	4	4	4	5	5	0.2%	4.2%	-0.5%	1.8%	0.6%	0.5%
Agriculture	2	3	4	3	4	4	4	5.3%	3.5%	-0.5%	1.1%	0.9%	0.8%
Road	9	12	14	14	14	13	11	3.3%	1.3%	0.3%	-0.2%	-0.7%	-1.7%
Rail	0	0	0	0	0	0	0	5.2%	2.5%	-0.1%	1.9%	1.7%	1.4%
Aviation	1	0	0	0	1	1	1	-3.3%	-3.0%	2.1%	2.6%	1.1%	-0.8%
Other Transport	0	0	0	0	0	0	0	24.3%	14.7%	0.6%	1.5%	-1.3%	-2.0%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%



Argentina	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	7	12	18	14	17	17	22	5.3%	3.9%	-2.6%	1.9%	0.2%	2.5%
Coal	0	0	1	2	3	4	4	3.8%	5.1%	9.6%	5.0%	3.2%	-2.4%
Oil	2	1	4	3	2	1	0	-5.9%	15.6%	-3.8%	-2.8%	-7.6%	-23.2%
Gas	5	11	13	8	10	4	3	7.4%	1.7%	-4.3%	1.6%	-7.6%	-4.1%
Biomass & Waste	0	0	1	1	2	7	16	6.6%	13.5%	3.7%	6.4%	14.2%	7.7%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	51	89	126	127	163	216	276	5.7%	3.5%	0.1%	2.6%	2.8%	2.5%
Coal	1	2	3	8	16	21	17	11.4%	4.7%	11.4%	6.4%	3.3%	-2.4%
of which CCS	0	0	0	0	1	15	16	n.s.	n.s.	n.s.	n.s.	27.1%	0.8%
Oil	5	3	17	11	8	4	0	-5.4%	19.2%	-4.1%	-2.6%	-7.6%	-23.1%
Gas	20	49	63	45	53	26	18	9.4%	2.6%	-3.3%	1.7%	-7.1%	-3.6%
of which CCS	0	0	0	0	0	12	12	n.s.	n.s.	n.s.	n.s.	39.0%	0.3%
Biomass & Waste	0	1	2	3	8	35	77	20.2%	12.5%	4.0%	9.4%	15.8%	8.3%
of which CCS	0	0	0	0	0	14	53	n.s.	n.s.	n.s.	n.s.	n.s.	14.4%
Nuclear	7	6	7	10	13	24	24	-1.6%	1.5%	3.4%	2.7%	6.2%	0.2%
Hydro	18	29	34	33	39	44	48	4.7%	1.6%	-0.3%	1.7%	1.2%	1.0%
Wind	0	0	0	16	23	50	66	n.s.	12.3%	n.s.	3.9%	8.0%	2.7%
Solar	0	0	0	1	3	13	24	n.s.	n.s.	n.s.	18.1%	15.5%	6.7%
Other	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	32.6%	18.8%	17.6%
<b>Generation Capacity (GW<sub>e</sub>)</b>	17	23	32	43	49	72	95	2.9%	3.6%	2.8%	1.4%	3.9%	2.8%
Coal	1	1	1	1	2	4	3	-1.9%	0.0%	5.2%	6.8%	5.3%	-1.1%
of which CCS	0	0	0	0	0	2	3	n.s.	n.s.	n.s.	n.s.	27.3%	3.4%
Oil	2	1	2	2	1	2	1	-3.8%	4.9%	1.1%	-4.9%	0.6%	-1.0%
Gas	7	11	17	18	16	10	9	4.8%	4.8%	0.8%	-1.3%	-4.3%	-1.1%
of which CCS	0	0	0	0	0	2	3	n.s.	n.s.	n.s.	n.s.	41.0%	5.1%
Biomass & Waste	0	0	1	0	1	5	11	19.6%	12.8%	-0.3%	8.7%	15.7%	8.8%
of which CCS	0	0	0	0	0	2	7	n.s.	n.s.	n.s.	n.s.	n.s.	14.7%
Nuclear	1	1	1	2	2	4	4	0.0%	0.0%	5.6%	2.5%	6.0%	0.0%
Hydro	7	9	11	12	14	15	17	3.0%	2.1%	0.6%	1.6%	1.2%	0.9%
Wind	0	0	0	7	10	21	27	n.s.	13.6%	n.s.	3.9%	8.0%	2.5%
Solar	0	0	0	1	3	12	22	n.s.	n.s.	n.s.	17.2%	14.8%	6.5%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	18.3%	17.1%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	31	47	56	58	61	57	53	4.3%	1.8%	0.4%	0.4%	-0.6%	-0.8%
Coal	1	1	1	1	1	1	0	0.1%	1.0%	1.1%	3.1%	-4.2%	-6.8%
Oil	16	22	25	23	21	16	11	3.6%	1.1%	-0.6%	-0.8%	-2.6%	-4.0%
Gas	10	15	19	22	20	13	5	4.4%	2.6%	1.3%	-0.6%	-4.6%	-9.2%
Electricity	4	6	10	10	13	16	20	6.4%	4.1%	0.3%	2.3%	2.6%	2.3%
Heat	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	39.3%	6.1%
Biomass & Other	1	3	2	3	5	10	14	6.4%	-3.2%	4.2%	6.2%	6.4%	3.6%
Share of Renewables <sup>3</sup> (%)	10%	12%	9%	13%	21%	49%	79%	1.5%	-2.1%	3.3%	5.3%	8.6%	5.0%
<b>Industry (incl. non-energy use)</b>	11	19	21	23	25	24	23	6.0%	1.0%	1.0%	0.7%	-0.5%	-0.5%
Coal	1	1	1	1	1	1	0	0.1%	1.0%	1.1%	3.1%	-4.2%	-6.8%
Oil	3	7	7	7	7	5	4	9.3%	0.6%	-0.2%	-0.7%	-1.9%	-2.6%
Gas	4	7	8	10	11	8	3	4.3%	2.1%	2.5%	0.5%	-3.4%	-8.3%
Electricity	2	3	4	4	5	6	8	4.8%	3.3%	0.4%	1.6%	2.1%	2.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	2	1	1	1	4	7	7.0%	-8.1%	-1.0%	5.9%	10.1%	6.3%
<b>Buildings</b>	9	12	16	16	16	15	13	2.9%	3.3%	-0.1%	0.1%	-1.2%	-0.9%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	1	2	1	1	1	0	-3.5%	4.1%	-5.7%	-1.8%	-4.7%	-10.0%
Gas	5	7	9	9	8	4	1	2.8%	2.7%	0.2%	-1.2%	-7.1%	-13.2%
Electricity	2	3	5	6	6	7	8	8.1%	4.7%	0.2%	0.9%	1.3%	1.6%
Heat	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	39.3%	6.1%
Biomass & Other	0	0	0	1	1	2	2	2.8%	-3.7%	8.6%	8.4%	3.2%	-1.5%
<b>Agriculture</b>	2	3	4	3	4	4	4	5.3%	3.5%	-0.5%	1.1%	0.9%	0.8%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	2	3	3	3	2	1	5.1%	3.3%	-0.7%	-0.6%	-3.9%	-4.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	1	1	2.5%	5.2%	1.9%	11.8%	9.6%	4.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	2	2	n.s.	10.4%	2.6%	13.4%	10.0%	3.4%
<b>Transport</b>	10	13	15	15	15	14	12	3.0%	1.3%	0.4%	-0.1%	-0.6%	-1.6%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	9	11	12	12	11	8	5	2.0%	0.4%	-0.2%	-0.8%	-2.5%	-4.7%
Gas	0	1	2	2	2	1	1	22.7%	4.7%	0.5%	-3.5%	-3.0%	-5.7%
Electricity	0	0	0	0	1	2	3	5.2%	2.5%	4.7%	29.1%	7.7%	3.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	1	1	2	2	3	n.s.	n.s.	8.1%	3.4%	3.3%	2.3%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	7	5	12	9	10	8	9	-2.6%	8.5%	-3.2%	0.8%	-1.2%	0.3%

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Brazil	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	150	176	199	216	229	236	238	1.6%	1.2%	0.8%	0.6%	0.3%	0.1%
GDP per capita (ppp, k\$'05)	7	8	10	9	12	15	18	1.0%	2.4%	-0.5%	2.1%	2.4%	2.0%
GDP per capita (mer, k\$'05)	4	4	6	5	7	8	10	1.0%	2.4%	-0.3%	2.1%	2.4%	2.0%
Share Value Added - Agriculture (%)	8	6	5	6	5	5	4	-3.6%	-0.5%	0.6%	-1.0%	-0.9%	-0.6%
Share Value Added - Industry (%)	39	28	28	26	26	24	23	-3.3%	0.1%	-0.6%	-0.3%	-0.6%	-0.7%
Share Value Added - Services (%)	53	67	67	68	69	71	73	2.3%	0.0%	0.2%	0.2%	0.3%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	15	18	23	-4.2%	5.6%	-0.1%	1.4%	2.0%	2.3%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	17	26	20	23	39	35	32	4.7%	-2.5%	1.3%	5.4%	-1.2%	-0.7%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	1 395	2 094	1 294	1 201	831	400	- 214	4.1%	-4.7%	-0.7%	-3.6%	-7.0%	n.s.
Total GHG (excl. sinks)	1 395	2 094	1 294	1 201	930	674	218	4.1%	-4.7%	-0.7%	-2.5%	-3.2%	-10.7%
Total GHG (energy, industry, agriculture)	633	830	977	1 052	930	674	218	2.7%	1.6%	0.7%	-1.2%	-3.2%	-10.7%
CO <sub>2</sub>	227	348	438	484	496	335	- 42	4.4%	2.3%	1.0%	0.3%	-3.8%	n.s.
CH <sub>4</sub>	285	338	357	368	265	196	142	1.7%	0.6%	0.3%	-3.2%	-3.0%	-3.2%
N <sub>2</sub> O	118	142	175	193	163	137	112	1.9%	2.1%	1.0%	-1.7%	-1.7%	-2.0%
F gases	4	2	6	7	6	6	6	-5.9%	12.0%	1.0%	-1.3%	-1.1%	1.4%
Total GHG from Energy and Industry	280	411	514	558	557	372	- 15	3.9%	2.2%	0.8%	0.0%	-4.0%	n.s.
CO <sub>2</sub> Emissions from Fuel Comb.	200	308	395	433	440	284	- 71	4.4%	2.5%	0.9%	0.2%	-4.3%	n.s.
Power generation/District heating	10	27	40	7	10	- 7	- 69	10.5%	4.0%	-15.9%	3.5%	n.s.	n.s.
Industry	59	94	111	118	134	88	- 10	4.7%	1.7%	0.7%	1.2%	-4.1%	n.s.
Buildings	20	25	23	20	15	7	3	2.2%	-0.6%	-1.5%	-3.1%	-6.7%	-10.2%
Agriculture	10	14	19	20	18	11	7	3.5%	2.5%	0.6%	-1.1%	-4.3%	-4.4%
Transport	80	124	171	229	226	172	75	4.5%	3.3%	3.0%	-0.1%	-2.7%	-8.0%
Other	20	24	31	39	38	12	- 76	1.7%	2.6%	2.2%	-0.2%	-10.5%	n.s.
CO <sub>2</sub> captured (CCS)	0	0	0	0	2	61	257	n.s.	n.s.	n.s.	n.s.	44.2%	15.5%
Coal	0	0	0	0	1	22	28	n.s.	n.s.	n.s.	n.s.	32.1%	2.4%
Gas	0	0	0	0	0	3	5	n.s.	n.s.	n.s.	n.s.	37.2%	4.8%
Biomass	0	0	0	0	0	35	224	n.s.	n.s.	n.s.	n.s.	n.s.	20.3%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	95	143	240	401	459	458	538	4.1%	5.4%	5.3%	1.3%	0.0%	1.6%
Coal	2	3	2	2	2	2	1	6.4%	-2.6%	-1.4%	-0.1%	-2.2%	-3.9%
Oil	32	63	105	222	198	74	5	6.9%	5.3%	7.7%	-1.1%	-9.4%	-24.2%
Natural gas	3	6	12	24	33	34	27	9.3%	6.9%	7.3%	2.9%	0.6%	-2.3%
Biomass	41	43	82	100	160	255	393	0.6%	6.6%	2.0%	4.8%	4.7%	4.4%
Nuclear <sup>1</sup>	1	2	4	5	6	20	26	10.5%	9.2%	1.7%	2.3%	13.2%	2.6%
Hydro	18	26	35	42	43	47	49	3.9%	2.9%	2.0%	0.2%	0.8%	0.4%
Other renewables	0	0	1	6	17	27	37	n.s.	33.4%	27.1%	10.8%	5.0%	3.2%
Net Imports	40	45	28	- 126	- 138	- 94	- 151						
Coal	9	14	16	15	15	14	11						
Oil	27	25	- 1	- 101	- 78	15	39						
Natural gas	1	2	11	- 5	- 9	- 9	- 6						
Biomass	0	0	0	- 38	- 67	- 107	- 171						
Biofuels	1	0	- 1	0	- 2	- 10	- 26						
Electricity	2	4	3	3	3	3	3						
Primary Energy Demand <sup>2</sup>	135	187	268	275	320	364	387	3.3%	3.7%	0.2%	1.5%	1.3%	0.6%
Coal	11	17	18	17	17	16	12	4.6%	0.7%	-0.7%	0.1%	-0.8%	-2.3%
Oil	59	88	104	121	120	89	43	4.0%	1.7%	1.5%	-0.1%	-3.0%	-7.0%
Natural gas	3	8	23	20	24	26	21	9.2%	11.4%	-1.6%	1.9%	0.7%	-1.9%
Biomass	41	43	82	62	93	148	222	0.6%	6.6%	-2.8%	4.2%	4.8%	4.2%
Nuclear <sup>1</sup>	1	2	4	5	6	20	26	10.5%	9.2%	1.7%	2.3%	13.2%	2.6%
Hydro	18	26	35	42	43	47	49	3.9%	2.9%	2.0%	0.2%	0.8%	0.4%
Other renewables	0	0	1	6	17	27	37	n.s.	33.4%	27.1%	10.8%	5.0%	3.2%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	135	187	268	275	320	364	387	3.3%	3.7%	0.2%	1.5%	1.3%	0.6%
Energy for Power Generation	22	37	58	56	76	110	146	5.5%	4.6%	-0.5%	3.1%	3.8%	2.8%
Other Energy Transformation & Losses	23	28	48	45	60	75	84	1.7%	5.7%	-0.6%	2.9%	2.1%	1.2%
Final consumption	114	156	215	229	257	274	268	3.2%	3.2%	0.6%	1.2%	0.7%	-0.2%
Steel, Non-Met. Minerals and Chem.	21	27	32	31	34	41	49	2.4%	1.6%	-0.3%	0.7%	2.0%	1.9%
Other Industry	21	32	51	50	64	78	88	3.9%	4.9%	-0.3%	2.5%	2.0%	1.2%
Non-Energy Use	9	14	17	15	16	16	14	3.8%	2.2%	-1.4%	0.8%	0.0%	-1.0%
Residential	18	21	24	23	24	25	25	1.4%	1.4%	-0.2%	0.3%	0.4%	0.2%
Services	5	8	11	13	16	20	25	5.1%	2.7%	1.8%	2.2%	2.5%	2.1%
Agriculture	6	7	10	11	12	13	13	2.0%	3.1%	1.1%	0.7%	0.6%	0.5%
Road	29	43	65	80	85	75	47	3.8%	4.2%	2.1%	0.6%	-1.2%	-4.5%
Rail	1	1	1	1	1	1	1	-2.0%	7.6%	1.0%	0.6%	0.3%	0.2%
Aviation	2	3	3	4	4	4	3	5.2%	0.2%	1.3%	1.0%	-0.3%	-1.8%
Other Transport	1	1	1	1	1	1	1	-1.6%	4.1%	-1.1%	1.0%	-1.7%	-2.3%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Brazil	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>4</b>	<b>9</b>	<b>19</b>	<b>3</b>	<b>10</b>	<b>16</b>	<b>34</b>	<b>10.4%</b>	<b>7.4%</b>	<b>-17.6%</b>	<b>13.8%</b>	<b>4.9%</b>	<b>7.7%</b>
Coal	1	3	3	1	2	3	3	8.3%	-0.2%	-12.6%	6.8%	8.5%	-2.6%
Oil	1	4	4	0	0	0	0	11.7%	-0.4%	-47.0%	n.s.	n.s.	n.s.
Gas	0	1	7	2	2	4	5	28.1%	22.8%	-13.0%	2.0%	6.9%	1.5%
Biomass & Waste	1	2	6	0	7	9	27	7.7%	14.0%	-25.0%	35.1%	3.2%	11.6%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>223</b>	<b>349</b>	<b>515</b>	<b>575</b>	<b>736</b>	<b>984</b>	<b>1 242</b>	<b>4.6%</b>	<b>4.0%</b>	<b>1.1%</b>	<b>2.5%</b>	<b>3.0%</b>	<b>2.4%</b>
Coal	5	11	11	3	7	17	13	8.8%	0.3%	-11.2%	7.5%	8.8%	-2.4%
of which CCS	0	0	0	0	1	16	13	n.s.	n.s.	n.s.	n.s.	32.2%	-2.2%
Oil	5	15	16	0	0	0	0	11.9%	0.6%	-46.8%	-23.6%	n.s.	n.s.
Gas	0	4	36	10	12	24	28	28.7%	24.5%	-12.6%	2.1%	7.4%	1.7%
of which CCS	0	0	0	0	0	9	13	n.s.	n.s.	n.s.	n.s.	41.7%	4.5%
Biomass & Waste	4	8	31	2	31	44	136	7.4%	14.9%	-25.7%	34.4%	3.5%	12.0%
of which CCS	0	0	0	0	0	17	94	n.s.	n.s.	n.s.	n.s.	n.s.	18.8%
Nuclear	2	6	15	17	22	80	103	10.5%	9.2%	1.8%	2.5%	13.7%	2.5%
Hydro	207	304	403	492	501	544	564	3.9%	2.9%	2.0%	0.2%	0.8%	0.4%
Wind	0	0	2	47	134	173	213	n.s.	n.s.	36.8%	10.9%	2.6%	2.1%
Solar	0	0	0	4	28	100	177	n.s.	n.s.	n.s.	22.6%	13.7%	5.8%
Other	0	0	0	0	0	2	7	n.s.	n.s.	n.s.	30.2%	18.6%	14.9%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>54</b>	<b>74</b>	<b>113</b>	<b>205</b>	<b>274</b>	<b>373</b>	<b>461</b>	<b>3.3%</b>	<b>4.3%</b>	<b>6.2%</b>	<b>2.9%</b>	<b>3.1%</b>	<b>2.1%</b>
Coal	1	2	2	5	5	6	7	2.7%	0.1%	10.1%	-0.2%	2.4%	0.5%
of which CCS	0	0	0	0	0	3	6	n.s.	n.s.	n.s.	n.s.	37.8%	5.7%
Oil	4	6	8	16	19	18	15	3.5%	2.9%	7.0%	1.6%	-0.1%	-2.1%
Gas	0	1	11	22	24	19	15	12.0%	23.2%	6.7%	1.2%	-2.5%	-2.2%
of which CCS	0	0	0	0	0	2	4	n.s.	n.s.	n.s.	n.s.	47.5%	9.6%
Biomass & Waste	1	2	8	20	34	55	77	5.1%	16.0%	9.7%	5.5%	4.9%	3.6%
of which CCS	0	0	0	0	0	2	15	n.s.	n.s.	n.s.	n.s.	n.s.	20.7%
Nuclear	1	2	2	2	3	11	13	11.8%	0.0%	1.9%	2.2%	13.4%	2.2%
Hydro	46	61	81	112	114	123	128	3.0%	2.8%	3.3%	0.2%	0.8%	0.4%
Wind	0	0	1	26	56	73	87	n.s.	46.8%	39.7%	7.9%	2.5%	1.8%
Solar	0	0	0	3	19	68	118	n.s.	n.s.	n.s.	22.4%	13.4%	5.6%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	29.4%	18.0%	14.3%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>114</b>	<b>156</b>	<b>215</b>	<b>229</b>	<b>257</b>	<b>274</b>	<b>268</b>	<b>3.2%</b>	<b>3.2%</b>	<b>0.6%</b>	<b>1.2%</b>	<b>0.7%</b>	<b>-0.2%</b>
Coal	6	9	11	13	12	9	7	3.8%	2.4%	1.2%	-0.1%	-3.3%	-2.7%
Oil	53	80	93	111	110	82	39	4.2%	1.6%	1.8%	-0.1%	-2.9%	-7.2%
Gas	2	5	13	12	16	16	11	7.2%	10.0%	-0.4%	2.6%	0.2%	-3.2%
Electricity	18	28	38	42	53	71	89	4.3%	3.1%	1.0%	2.4%	3.0%	2.3%
Heat	0	0	0	2	3	4	4	n.s.	28.4%	16.0%	5.7%	2.7%	-0.2%
Biomass & Other	35	35	60	50	63	92	118	0.1%	5.4%	-1.8%	2.3%	4.0%	2.5%
Share of Renewables <sup>3</sup> (%)	49%	42%	47%	44%	52%	70%	91%	-1.6%	1.1%	-0.6%	1.8%	2.9%	2.6%
<b>Industry (incl. non-energy use)</b>	<b>52</b>	<b>72</b>	<b>100</b>	<b>96</b>	<b>113</b>	<b>135</b>	<b>151</b>	<b>3.3%</b>	<b>3.3%</b>	<b>-0.4%</b>	<b>1.7%</b>	<b>1.7%</b>	<b>1.2%</b>
Coal	6	9	11	13	12	9	7	3.8%	2.4%	1.2%	-0.1%	-3.3%	-2.7%
Oil	17	26	27	26	29	23	15	4.6%	0.2%	-0.2%	1.0%	-2.2%	-4.6%
Gas	2	4	10	10	13	12	7	7.0%	8.8%	-0.4%	2.8%	-0.5%	-5.0%
Electricity	10	13	17	17	22	29	35	2.7%	3.3%	-0.3%	2.8%	2.6%	1.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	18	20	34	30	36	61	88	1.5%	5.3%	-1.3%	1.9%	5.3%	3.7%
<b>Buildings</b>	<b>23</b>	<b>29</b>	<b>34</b>	<b>36</b>	<b>40</b>	<b>45</b>	<b>50</b>	<b>2.3%</b>	<b>1.8%</b>	<b>0.4%</b>	<b>1.0%</b>	<b>1.3%</b>	<b>1.1%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	6	8	7	6	4	2	0	2.3%	-0.9%	-2.0%	-4.1%	-8.4%	-11.5%
Gas	0	0	0	1	1	1	0	1.9%	7.3%	4.9%	3.9%	-1.2%	-7.8%
Electricity	8	14	19	22	26	33	40	5.9%	3.0%	1.8%	1.8%	2.3%	1.8%
Heat	0	0	0	2	3	4	4	n.s.	28.4%	16.0%	5.7%	2.7%	-0.2%
Biomass & Other	9	7	8	6	6	6	6	-2.2%	1.1%	-3.3%	0.0%	0.4%	0.4%
<b>Agriculture</b>	<b>6</b>	<b>7</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>13</b>	<b>2.0%</b>	<b>3.1%</b>	<b>1.1%</b>	<b>0.7%</b>	<b>0.6%</b>	<b>0.5%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	5	6	6	6	4	2	3.5%	2.5%	0.6%	-1.1%	-4.3%	-4.4%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	1	1	2	2	3	4	4	6.8%	3.2%	4.7%	1.9%	2.4%	1.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	2	2	3	2	3	5	7	-2.8%	4.4%	-0.2%	3.3%	4.7%	2.1%
<b>Transport</b>	<b>33</b>	<b>47</b>	<b>70</b>	<b>86</b>	<b>92</b>	<b>81</b>	<b>53</b>	<b>3.7%</b>	<b>4.0%</b>	<b>2.0%</b>	<b>0.6%</b>	<b>-1.2%</b>	<b>-4.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	27	41	54	73	72	54	21	4.4%	2.7%	3.1%	-0.1%	-2.9%	-8.8%
Gas	0	0	2	1	1	3	4	n.s.	21.9%	-2.9%	0.3%	5.9%	3.6%
Electricity	0	0	0	0	1	5	10	0.5%	2.9%	2.1%	22.0%	15.0%	7.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	6	6	15	11	17	20	17	-0.3%	9.3%	-2.5%	4.1%	1.6%	-1.4%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>23</b>	<b>28</b>	<b>48</b>	<b>45</b>	<b>60</b>	<b>75</b>	<b>84</b>	<b>1.7%</b>	<b>5.7%</b>	<b>-0.6%</b>	<b>2.9%</b>	<b>2.1%</b>	<b>1.2%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Canada	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	28	31	34	38	40	42	44	1.0%	1.1%	1.0%	0.7%	0.5%	0.4%
GDP per capita (ppp, k\$'05)	27	33	35	39	44	50	58	1.9%	0.8%	0.9%	1.3%	1.4%	1.5%
GDP per capita (mer, k\$'05)	28	33	36	40	46	52	61	1.8%	0.8%	1.0%	1.3%	1.4%	1.5%
Share Value Added - Agriculture (%)	3	2	2	2	2	2	2	-2.3%	-1.7%	-0.3%	-0.4%	-0.4%	-0.3%
Share Value Added - Industry (%)	31	33	32	30	28	24	21	0.6%	-0.4%	-0.5%	-1.0%	-1.2%	-1.6%
Share Value Added - Services (%)	66	65	66	68	71	74	77	-0.2%	0.2%	0.3%	0.4%	0.5%	0.5%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	15	18	23	-4.2%	5.6%	-0.1%	1.4%	2.0%	2.3%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	17	26	20	23	39	35	32	4.7%	-2.5%	1.3%	5.4%	-1.2%	-0.7%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	522	679	780	807	557	277	-39	2.7%	1.4%	0.3%	-3.6%	-6.8%	n.s.
Total GHG (excl. sinks)	617	746	780	807	666	403	103	1.9%	0.4%	0.3%	-1.9%	-4.9%	-12.8%
Total GHG (energy, industry, agriculture)	599	734	721	730	613	306	67	2.1%	-0.2%	0.1%	-1.7%	-6.7%	-14.0%
CO <sub>2</sub>	458	569	563	589	497	226	5	2.2%	-0.1%	0.4%	-1.7%	-7.6%	-31.7%
CH <sub>4</sub>	72	95	89	74	59	29	20	2.8%	-0.7%	-1.8%	-2.2%	-6.8%	-3.9%
N <sub>2</sub> O	59	60	60	58	52	47	39	0.2%	0.1%	-0.4%	-1.0%	-1.2%	-1.7%
F gases	11	10	9	9	4	4	4	-0.4%	-1.2%	0.0%	-7.8%	-1.2%	-0.2%
Total GHG from Energy and Industry	552	678	666	675	562	257	23	2.1%	-0.2%	0.1%	-1.8%	-7.5%	-21.6%
CO <sub>2</sub> Emissions from Fuel Comb.	431	535	533	556	471	210	-2	2.2%	0.0%	0.4%	-1.7%	-7.8%	n.s.
Power generation/District heating	96	134	109	66	39	-31	-89	3.3%	-2.1%	-4.8%	-5.1%	n.s.	n.s.
Industry	88	99	81	94	78	47	12	1.2%	-1.9%	1.5%	-1.9%	-4.8%	-12.9%
Buildings	74	85	72	79	71	41	14	1.5%	-1.7%	1.0%	-1.1%	-5.3%	-10.2%
Agriculture	8	10	15	18	16	10	7	3.1%	3.6%	1.9%	-1.2%	-4.0%	-4.0%
Transport	115	136	158	161	132	92	45	1.7%	1.5%	0.2%	-2.0%	-3.5%	-6.9%
Other	51	71	100	137	136	50	9	3.4%	3.5%	3.2%	-0.1%	-9.4%	-15.6%
CO <sub>2</sub> captured (CCS)	0	0	0	0	9	69	133	n.s.	n.s.	n.s.	n.s.	22.1%	6.8%
Coal	0	0	0	0	7	24	11	n.s.	n.s.	n.s.	n.s.	12.7%	-7.8%
Gas	0	0	0	0	2	6	5	n.s.	n.s.	n.s.	n.s.	11.7%	-0.9%
Biomass	0	0	0	0	0	39	117	n.s.	n.s.	n.s.	6.3%	n.s.	11.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	280	385	402	520	578	441	411	3.2%	0.4%	2.6%	1.1%	-2.7%	-0.7%
Coal	40	39	35	33	74	68	62	0.0%	-1.1%	-0.6%	8.2%	-0.7%	-1.0%
Oil	97	133	164	212	174	41	24	3.2%	2.1%	2.6%	-2.0%	-13.6%	-5.2%
Natural gas	90	150	132	178	190	154	116	5.2%	-1.3%	3.0%	0.7%	-2.1%	-2.8%
Biomass	8	12	14	29	56	72	102	3.8%	2.1%	7.0%	7.0%	2.5%	3.6%
Nuclear <sup>1</sup>	19	19	24	28	36	47	38	0.0%	2.2%	1.5%	2.5%	2.8%	-2.2%
Hydro	26	31	30	34	36	37	39	1.9%	-0.2%	1.1%	0.5%	0.5%	0.5%
Other renewables	0	0	1	6	13	22	30	n.s.	42.8%	21.5%	7.9%	5.6%	3.3%
Net Imports	-67	-132	-148	-252	-304	-207	-212						
Coal	-14	-7	-12	-13	-59	-63	-60						
Oil	-17	-46	-80	-137	-117	-9	-20						
Natural gas	-36	-76	-54	-87	-103	-109	-95						
Biomass	0	0	0	-11	-20	-20	-28						
Biofuels	0	0	0	0	-1	-3	-5						
Electricity	0	-3	-2	-4	-4	-4	-4						
Primary Energy Demand <sup>2</sup>	212	252	253	267	274	234	198	1.7%	0.0%	0.5%	0.2%	-1.6%	-1.6%
Coal	25	32	23	21	15	6	1	2.5%	-3.3%	-1.1%	-3.3%	-8.8%	-13.9%
Oil	80	87	85	75	57	32	4	0.8%	-0.3%	-1.1%	-2.7%	-5.8%	-18.7%
Natural gas	54	74	79	91	87	45	20	3.2%	0.6%	1.4%	-0.4%	-6.3%	-7.8%
Biomass	8	12	14	17	36	52	74	3.7%	1.8%	2.0%	7.6%	3.7%	3.7%
Nuclear <sup>1</sup>	19	19	24	28	36	47	38	0.0%	2.2%	1.5%	2.5%	2.8%	-2.2%
Hydro	26	31	30	34	36	37	39	1.9%	-0.2%	1.1%	0.5%	0.5%	0.5%
Other renewables	0	0	1	6	13	22	30	n.s.	42.8%	21.5%	7.9%	5.6%	3.3%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	212	252	253	267	274	234	198	1.7%	0.0%	0.5%	0.2%	-1.6%	-1.6%
Energy for Power Generation	71	89	89	88	104	125	136	2.3%	0.0%	-0.2%	1.7%	1.9%	0.9%
Other Energy Transformation & Losses	20	20	18	19	28	-2	-13	-0.2%	-1.1%	0.7%	3.8%	n.s.	n.s.
Final consumption	157	185	189	207	201	183	157	1.7%	0.2%	1.0%	-0.3%	-1.0%	-1.5%
Steel, Non-Met. Minerals and Chem.	11	12	11	12	9	7	6	0.8%	-1.0%	0.5%	-3.0%	-2.2%	-2.1%
Other Industry	37	44	33	39	39	36	34	1.7%	-2.9%	1.8%	0.0%	-0.6%	-0.8%
Non-Energy Use	15	20	23	25	24	21	17	2.8%	1.7%	0.7%	-0.6%	-1.1%	-2.3%
Residential	29	31	33	36	37	34	30	0.7%	0.7%	0.9%	0.2%	-0.9%	-1.2%
Services	22	27	25	28	32	32	34	2.2%	-0.7%	1.0%	1.2%	0.2%	0.4%
Agriculture	3	4	6	7	7	8	8	2.6%	2.8%	2.0%	0.9%	0.7%	0.7%
Road	33	39	49	51	45	36	22	1.7%	2.2%	0.5%	-1.3%	-2.1%	-4.7%
Rail	2	2	2	2	2	2	2	-0.7%	0.2%	1.2%	-0.1%	-0.7%	-0.9%
Aviation	3	4	4	5	5	4	3	2.4%	-0.7%	2.5%	-0.4%	-1.6%	-2.7%
Other Transport	1	2	3	2	2	2	1	0.4%	6.6%	-3.1%	0.1%	-2.6%	-2.9%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Canada	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>27</b>	<b>39</b>	<b>34</b>	<b>20</b>	<b>20</b>	<b>19</b>	<b>29</b>	<b>3.9%</b>	<b>-1.3%</b>	<b>-5.1%</b>	<b>-0.3%</b>	<b>-0.5%</b>	<b>4.4%</b>
Coal	20	27	19	13	8	5	2	2.9%	-3.3%	-3.5%	-5.1%	-4.1%	-9.6%
Oil	4	3	2	0	0	0	0	-1.5%	-4.3%	n.s.	n.s.	n.s.	n.s.
Gas	2	7	11	6	6	3	2	14.7%	4.4%	-6.5%	0.6%	-6.7%	-2.3%
Biomass & Waste	1	2	2	1	6	11	25	7.8%	0.7%	-4.5%	15.8%	6.4%	8.8%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>482</b>	<b>605</b>	<b>600</b>	<b>663</b>	<b>790</b>	<b>934</b>	<b>1 051</b>	<b>2.3%</b>	<b>-0.1%</b>	<b>1.0%</b>	<b>1.8%</b>	<b>1.7%</b>	<b>1.2%</b>
Coal	82	118	80	57	37	24	9	3.6%	-3.8%	-3.2%	-4.2%	-4.2%	-9.4%
of which CCS	0	0	0	0	7	24	9	n.s.	n.s.	n.s.	n.s.	13.4%	-9.4%
Oil	16	15	8	0	0	0	0	-1.1%	-6.1%	n.s.	n.s.	n.s.	n.s.
Gas	10	33	52	34	39	19	15	13.2%	4.4%	-4.0%	1.2%	-7.0%	-2.1%
of which CCS	0	0	0	0	3	11	10	n.s.	n.s.	n.s.	n.s.	14.0%	-1.1%
Biomass & Waste	4	8	9	6	26	51	123	7.2%	1.4%	-4.5%	16.3%	6.9%	9.3%
of which CCS	0	0	0	0	0	41	112	n.s.	n.s.	n.s.	n.s.	n.s.	10.5%
Nuclear	73	73	91	106	138	186	149	0.0%	2.2%	1.5%	2.7%	3.0%	-2.2%
Hydro	297	359	351	393	413	433	455	1.9%	-0.2%	1.1%	0.5%	0.5%	0.5%
Wind	0	0	9	59	121	194	258	n.s.	42.5%	20.7%	7.4%	4.9%	2.9%
Solar	0	0	0	8	16	27	40	n.s.	36.0%	37.6%	6.6%	5.2%	4.2%
Other	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	26.9%	16.4%	14.9%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>103</b>	<b>111</b>	<b>130</b>	<b>177</b>	<b>224</b>	<b>287</b>	<b>331</b>	<b>0.7%</b>	<b>1.6%</b>	<b>3.1%</b>	<b>2.4%</b>	<b>2.5%</b>	<b>1.4%</b>
Coal	19	18	14	15	14	14	10	-0.8%	-2.3%	0.9%	-1.2%	0.2%	-3.1%
of which CCS	0	0	0	0	1	6	7	n.s.	n.s.	n.s.	n.s.	21.2%	1.5%
Oil	7	8	7	11	14	15	13	0.5%	-1.4%	5.5%	2.3%	0.1%	-1.4%
Gas	4	7	13	24	30	32	21	5.9%	7.0%	6.4%	2.2%	0.9%	-4.1%
of which CCS	0	0	0	0	0	5	8	n.s.	n.s.	n.s.	n.s.	28.3%	5.6%
Biomass & Waste	1	1	5	3	5	19	44	2.2%	15.1%	-5.0%	6.6%	13.7%	8.8%
of which CCS	0	0	0	0	0	7	23	n.s.	n.s.	n.s.	n.s.	n.s.	13.4%
Nuclear	13	10	13	13	17	23	18	-2.2%	2.3%	0.6%	2.5%	3.1%	-2.3%
Hydro	59	67	75	78	82	86	90	1.3%	1.1%	0.4%	0.5%	0.5%	0.5%
Wind	0	0	4	25	49	77	101	n.s.	39.9%	20.2%	6.9%	4.5%	2.8%
Solar	0	0	0	7	13	22	33	n.s.	44.3%	37.6%	6.6%	5.2%	4.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	26.1%	15.8%	14.4%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>157</b>	<b>185</b>	<b>189</b>	<b>207</b>	<b>201</b>	<b>183</b>	<b>157</b>	<b>1.7%</b>	<b>0.2%</b>	<b>1.0%</b>	<b>-0.3%</b>	<b>-1.0%</b>	<b>-1.5%</b>
Coal	4	5	4	4	3	2	2	0.6%	-1.4%	0.0%	-1.4%	-3.5%	-4.3%
Oil	69	80	92	94	77	54	29	1.6%	1.4%	0.2%	-1.9%	-3.5%	-6.0%
Gas	40	49	40	50	45	28	12	1.9%	-2.0%	2.4%	-1.2%	-4.4%	-8.0%
Electricity	36	41	41	44	53	63	71	1.4%	0.0%	0.7%	1.9%	1.8%	1.3%
Heat	1	1	0	1	2	4	5	2.5%	-5.9%	5.6%	7.6%	8.5%	4.1%
Biomass & Other	7	10	11	15	21	31	37	3.1%	1.6%	2.5%	3.9%	3.8%	1.8%
Share of Renewables <sup>3</sup> (%)	22%	24%	25%	28%	40%	60%	86%	0.6%	0.4%	1.3%	3.6%	4.2%	3.6%
<b>Industry (incl. non-energy use)</b>	<b>63</b>	<b>76</b>	<b>67</b>	<b>76</b>	<b>71</b>	<b>64</b>	<b>56</b>	<b>1.8%</b>	<b>-1.2%</b>	<b>1.2%</b>	<b>-0.6%</b>	<b>-1.0%</b>	<b>-1.4%</b>
Coal	4	5	4	4	3	2	2	0.7%	-1.4%	0.0%	-1.4%	-3.4%	-4.3%
Oil	18	22	27	26	22	17	12	2.0%	1.9%	-0.1%	-1.8%	-2.5%	-3.1%
Gas	20	23	16	22	19	13	5	1.5%	-3.9%	3.4%	-1.5%	-4.0%	-9.0%
Electricity	14	17	15	16	18	19	20	1.9%	-1.5%	0.8%	1.1%	0.6%	0.2%
Heat	1	1	0	1	1	1	1	2.5%	-6.6%	4.7%	-0.2%	-0.3%	-0.2%
Biomass & Other	6	8	6	7	8	13	17	3.1%	-3.1%	1.5%	1.9%	4.7%	3.0%
<b>Buildings</b>	<b>50</b>	<b>58</b>	<b>58</b>	<b>64</b>	<b>69</b>	<b>66</b>	<b>63</b>	<b>1.4%</b>	<b>0.1%</b>	<b>1.0%</b>	<b>0.7%</b>	<b>-0.4%</b>	<b>-0.4%</b>
Coal	0	0	0	0	0	0	0	-3.1%	-1.1%	-8.2%	-7.0%	-16.0%	n.s.
Oil	9	9	5	5	5	4	1	0.0%	-5.0%	-0.5%	0.1%	-3.3%	-9.0%
Gas	20	25	24	27	23	13	4	2.3%	-0.5%	1.5%	-1.5%	-5.9%	-10.7%
Electricity	20	23	25	26	31	36	41	1.0%	0.9%	0.6%	1.6%	1.6%	1.4%
Heat	0	0	0	0	1	3	5	4.4%	17.3%	12.7%	22.8%	12.0%	4.8%
Biomass & Other	1	2	5	6	8	11	12	2.1%	9.4%	2.1%	4.2%	2.6%	1.0%
<b>Agriculture</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>8</b>	<b>2.6%</b>	<b>2.8%</b>	<b>2.0%</b>	<b>0.9%</b>	<b>0.7%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	3	4	5	4	3	2	3.3%	4.2%	1.7%	-1.2%	-4.2%	-4.2%
Gas	0	1	1	1	1	1	0	1.6%	-0.3%	4.2%	-0.8%	-2.9%	-2.9%
Electricity	1	1	1	1	1	2	3	1.1%	-0.2%	1.3%	4.4%	5.1%	3.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	38.4%	10.8%	3.6%
<b>Transport</b>	<b>40</b>	<b>47</b>	<b>57</b>	<b>61</b>	<b>54</b>	<b>44</b>	<b>29</b>	<b>1.6%</b>	<b>2.0%</b>	<b>0.5%</b>	<b>-1.1%</b>	<b>-2.0%</b>	<b>-4.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	40	47	56	58	46	31	13	1.6%	1.9%	0.3%	-2.2%	-3.9%	-7.9%
Gas	0	0	0	0	1	2	3	3.6%	-2.2%	22.9%	16.4%	5.2%	1.7%
Electricity	0	0	0	0	2	5	7	n.s.	n.s.	n.s.	27.5%	8.6%	3.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	1	2	4	5	5	n.s.	24.2%	7.5%	6.0%	2.3%	-0.8%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>20</b>	<b>20</b>	<b>18</b>	<b>19</b>	<b>28</b>	<b>-2</b>	<b>-13</b>	<b>-0.2%</b>	<b>-1.1%</b>	<b>0.7%</b>	<b>3.8%</b>	<b>n.s.</b>	<b>n.s.</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Chile	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	13	15	17	19	20	21	22	1.4%	1.2%	1.0%	0.7%	0.4%	0.2%
GDP per capita (ppp, k\$'05)	7	11	15	18	22	25	29	4.9%	2.7%	2.2%	2.0%	1.5%	1.3%
GDP per capita (mer, k\$'05)	4	7	9	11	13	15	17	4.9%	2.7%	2.1%	2.0%	1.5%	1.3%
Share Value Added - Agriculture (%)	10	6	7	6	5	5	5	-3.8%	1.3%	-2.5%	-0.5%	-0.3%	-0.2%
Share Value Added - Industry (%)	39	33	39	37	35	34	33	-1.7%	1.7%	-0.5%	-0.4%	-0.3%	-0.4%
Share Value Added - Services (%)	52	61	54	57	59	60	62	1.6%	-1.2%	0.7%	0.3%	0.2%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	15	18	23	-4.2%	5.6%	-0.1%	1.4%	2.0%	2.3%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	17	26	20	23	39	35	32	4.7%	-2.5%	1.3%	5.4%	-1.2%	-0.7%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	56	71	97	104	57	-11	-65	2.4%	3.1%	0.8%	-5.9%	n.s.	n.s.
Total GHG (excl. sinks)	56	83	112	120	114	60	8	4.0%	3.0%	0.7%	-0.5%	-6.3%	-18.1%
Total GHG (energy, industry, agriculture)	51	83	104	120	114	60	8	5.0%	2.2%	1.4%	-0.5%	-6.3%	-18.1%
CO <sub>2</sub>	34	60	78	90	89	40	-8	5.7%	2.7%	1.5%	-0.1%	-7.7%	n.s.
CH <sub>4</sub>	12	17	18	20	17	13	10	3.6%	0.6%	1.3%	-1.8%	-2.8%	-2.3%
N <sub>2</sub> O	5	7	8	9	8	7	6	3.0%	1.8%	1.4%	-1.9%	-1.3%	-1.4%
F gases	0	0	0	0	0	0	0	-8.4%	1.9%	-4.8%	n.s.	n.s.	n.s.
Total GHG from Energy and Industry	41	71	90	103	100	48	-2	5.6%	2.3%	1.4%	-0.3%	-7.1%	n.s.
CO <sub>2</sub> Emissions from Fuel Comb.	31	55	72	82	81	33	-12	5.7%	2.8%	1.4%	-0.2%	-8.6%	n.s.
Power generation/District heating	8	14	25	32	33	1	-22	5.2%	6.4%	2.6%	0.2%	-27.3%	n.s.
Industry	8	15	15	15	14	7	0	6.1%	0.3%	-0.4%	-0.5%	-6.1%	n.s.
Buildings	3	5	6	5	4	3	1	3.7%	1.8%	-0.4%	-2.1%	-5.2%	-10.1%
Agriculture	0	1	1	1	1	1	0	3.7%	4.5%	-0.4%	-0.7%	-4.1%	-4.3%
Transport	9	17	18	21	21	16	10	6.7%	0.8%	1.4%	-0.1%	-2.5%	-5.1%
Other	2	4	7	8	8	5	-1	5.4%	5.1%	2.0%	-0.3%	-4.9%	n.s.
CO <sub>2</sub> captured (CCS)	0	0	0	0	2	20	38	n.s.	n.s.	n.s.	n.s.	29.4%	6.6%
Coal	0	0	0	0	1	11	8	n.s.	n.s.	n.s.	n.s.	22.3%	-2.8%
Gas	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	34.2%	0.9%
Biomass	0	0	0	0	0	8	29	n.s.	n.s.	n.s.	n.s.	n.s.	13.4%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	8	8	9	16	22	32	42	0.8%	0.8%	6.0%	3.0%	4.1%	2.7%
Coal	2	0	0	2	2	2	1	-15.8%	0.0%	22.6%	0.2%	-1.5%	-2.5%
Oil	1	0	1	1	1	2	2	-9.3%	4.2%	3.2%	4.1%	2.9%	2.4%
Natural gas	1	2	2	3	5	7	9	1.2%	-0.2%	5.1%	7.0%	3.7%	2.7%
Biomass	3	4	5	7	8	14	20	4.6%	0.4%	4.7%	1.2%	5.7%	3.3%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	20.7%	18.3%
Hydro	1	2	2	2	3	3	3	7.6%	1.6%	1.8%	1.6%	1.4%	0.8%
Other renewables	0	0	0	1	2	4	6	n.s.	n.s.	40.9%	8.8%	6.2%	3.5%
Net Imports	6	17	22	22	20	8	-4						
Coal	1	3	4	6	6	4	2						
Oil	5	10	14	14	12	7	2						
Natural gas	0	4	3	2	2	-3	-7						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	14	25	31	38	41	40	38	6.2%	2.0%	2.3%	0.7%	-0.3%	-0.4%
Coal	3	3	5	8	8	5	3	2.3%	3.5%	5.8%	-0.5%	-3.5%	-5.3%
Oil	6	10	15	15	14	9	4	5.0%	3.6%	0.0%	-0.9%	-4.3%	-7.2%
Natural gas	1	5	4	5	7	4	2	15.9%	-1.5%	0.7%	3.8%	-4.7%	-5.5%
Biomass	3	4	5	7	8	14	20	4.6%	0.4%	4.7%	1.2%	5.7%	3.3%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	20.7%	18.3%
Hydro	1	2	2	2	3	3	3	7.6%	1.6%	1.8%	1.6%	1.4%	0.8%
Other renewables	0	0	0	1	2	4	6	n.s.	n.s.	40.9%	8.8%	6.2%	3.5%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	14	25	31	38	41	40	38	6.2%	2.0%	2.3%	0.7%	-0.3%	-0.4%
Energy for Power Generation	3	6	10	15	17	18	21	7.2%	4.7%	4.2%	1.5%	0.8%	1.3%
Other Energy Transformation & Losses	1	2	2	3	4	4	4	6.2%	1.6%	5.6%	1.3%	0.0%	0.5%
Final consumption	11	20	24	27	30	29	27	6.2%	1.5%	1.4%	0.8%	-0.2%	-0.5%
Steel, Non-Met. Minerals and Chem.	0	1	1	1	1	1	0	4.1%	-0.3%	1.1%	-0.4%	-2.1%	-2.3%
Other Industry	3	6	8	10	12	12	13	7.1%	2.8%	2.2%	1.5%	0.4%	0.7%
Non-Energy Use	1	2	1	1	1	1	1	10.1%	-8.2%	-2.7%	0.2%	-1.1%	-2.6%
Residential	3	5	5	6	6	5	5	4.5%	0.9%	0.6%	-0.1%	-0.5%	-0.8%
Services	0	1	1	2	2	2	2	2.7%	8.2%	1.2%	1.5%	0.5%	0.4%
Agriculture	0	0	0	0	0	0	0	4.2%	4.1%	-0.1%	1.2%	0.8%	0.6%
Road	3	5	6	7	8	7	6	6.8%	2.2%	1.8%	0.7%	-0.9%	-2.3%
Rail	0	0	0	0	0	0	0	0.2%	8.1%	1.1%	1.0%	0.4%	0.2%
Aviation	0	0	0	0	0	0	0	7.4%	4.8%	0.3%	-0.2%	-1.7%	-3.3%
Other Transport	0	0	0	0	0	0	0	2.0%	2.3%	0.3%	1.4%	-2.0%	-2.7%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Chile	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>2</b>	<b>5</b>	<b>8</b>	<b>11</b>	<b>12</b>	<b>11</b>	<b>12</b>	<b>7.1%</b>	<b>5.6%</b>	<b>3.9%</b>	<b>0.6%</b>	<b>-0.8%</b>	<b>0.4%</b>
Coal	2	2	4	6	6	4	2	2.4%	6.5%	4.6%	-0.9%	-3.9%	-6.3%
Oil	0	0	2	1	1	1	0	-0.4%	14.3%	-7.8%	3.8%	-7.3%	-31.0%
Gas	0	2	2	2	4	1	1	38.7%	0.6%	2.9%	4.4%	-9.1%	-3.7%
Biomass & Waste	0	0	0	2	2	5	9	13.5%	1.0%	19.2%	-2.2%	12.4%	4.7%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>18</b>	<b>40</b>	<b>60</b>	<b>88</b>	<b>111</b>	<b>131</b>	<b>157</b>	<b>8.5%</b>	<b>4.2%</b>	<b>3.9%</b>	<b>2.3%</b>	<b>1.6%</b>	<b>1.9%</b>
Coal	7	8	17	29	27	18	9	2.6%	7.1%	5.6%	-0.6%	-4.0%	-6.4%
of which CCS	0	0	0	0	2	12	9	n.s.	n.s.	n.s.	n.s.	21.9%	-2.9%
Oil	2	2	8	3	5	2	0	-0.4%	17.4%	-8.9%	3.8%	-7.3%	-30.9%
Gas	0	10	11	12	19	8	6	49.4%	0.2%	1.3%	4.4%	-8.6%	-2.7%
of which CCS	0	0	0	0	0	3	4	n.s.	n.s.	n.s.	n.s.	38.0%	1.0%
Biomass & Waste	0	1	2	7	6	25	42	13.4%	9.1%	12.4%	-1.3%	14.5%	5.6%
of which CCS	0	0	0	0	0	9	29	n.s.	n.s.	n.s.	n.s.	n.s.	12.4%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	9	19	22	26	30	35	38	7.6%	1.6%	1.8%	1.6%	1.4%	0.8%
Wind	0	0	0	9	17	25	32	n.s.	n.s.	36.7%	7.0%	3.9%	2.5%
Solar	0	0	0	2	7	18	28	n.s.	n.s.	n.s.	11.9%	10.2%	4.7%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	28.6%	18.5%	15.1%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>5</b>	<b>10</b>	<b>16</b>	<b>28</b>	<b>38</b>	<b>47</b>	<b>60</b>	<b>8.0%</b>	<b>4.9%</b>	<b>5.3%</b>	<b>3.1%</b>	<b>2.3%</b>	<b>2.4%</b>
Coal	1	2	2	5	5	4	3	6.5%	0.9%	6.6%	1.6%	-2.9%	-2.3%
of which CCS	0	0	0	0	0	2	2	n.s.	n.s.	n.s.	n.s.	22.9%	3.2%
Oil	1	1	3	4	5	5	4	-0.9%	13.9%	3.8%	2.0%	-0.4%	-2.8%
Gas	0	3	4	4	5	2	2	43.0%	4.8%	0.2%	1.0%	-10.6%	2.8%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	39.1%	5.6%
Biomass & Waste	0	0	1	1	1	3	7	4.3%	12.3%	3.8%	-4.9%	14.6%	7.4%
of which CCS	0	0	0	0	0	1	4	n.s.	n.s.	n.s.	n.s.	n.s.	13.8%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	2	4	5	7	9	10	11	5.8%	2.8%	3.1%	1.6%	1.4%	0.8%
Wind	0	0	0	4	7	10	13	n.s.	n.s.	36.1%	6.9%	3.7%	2.3%
Solar	0	0	0	2	5	13	19	n.s.	n.s.	n.s.	11.7%	9.6%	4.4%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	18.0%	14.6%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>11</b>	<b>20</b>	<b>24</b>	<b>27</b>	<b>30</b>	<b>29</b>	<b>27</b>	<b>6.2%</b>	<b>1.5%</b>	<b>1.4%</b>	<b>0.8%</b>	<b>-0.2%</b>	<b>-0.5%</b>
Coal	1	1	0	1	1	0	0	1.0%	-5.6%	3.8%	2.4%	-6.4%	-9.6%
Oil	5	9	12	13	11	8	4	5.3%	2.8%	0.8%	-1.2%	-3.8%	-5.9%
Gas	1	3	2	2	3	2	1	13.4%	-3.3%	-2.4%	3.2%	-0.9%	-7.6%
Electricity	1	3	5	7	9	10	12	9.0%	4.1%	3.6%	2.4%	1.6%	1.9%
Heat	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	14.1%	7.4%	3.9%
Biomass & Other	3	4	4	5	6	8	9	4.1%	0.4%	1.7%	1.8%	2.6%	1.6%
Share of Renewables <sup>3</sup> (%)	33%	31%	27%	32%	40%	65%	90%	-0.7%	-1.4%	1.8%	2.3%	5.0%	3.3%
<b>Industry (incl. non-energy use)</b>	<b>4</b>	<b>9</b>	<b>10</b>	<b>12</b>	<b>13</b>	<b>13</b>	<b>14</b>	<b>7.5%</b>	<b>0.5%</b>	<b>1.7%</b>	<b>1.3%</b>	<b>0.2%</b>	<b>0.4%</b>
Coal	1	1	0	1	1	0	0	1.7%	-5.5%	3.9%	2.4%	-6.4%	-9.6%
Oil	2	2	3	3	3	1	1	3.4%	4.6%	0.5%	-2.1%	-6.2%	-8.2%
Gas	1	3	2	1	1	1	1	14.9%	-4.8%	-5.2%	2.5%	-0.5%	-8.0%
Electricity	1	2	3	5	6	7	8	9.7%	3.4%	4.4%	2.2%	1.2%	1.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-0.2%	-0.3%	-0.2%
Biomass & Other	1	1	1	2	2	3	5	5.3%	-0.3%	4.0%	3.1%	4.6%	2.8%
<b>Buildings</b>	<b>4</b>	<b>5</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>4.3%</b>	<b>2.0%</b>	<b>0.7%</b>	<b>0.3%</b>	<b>-0.2%</b>	<b>-0.5%</b>
Coal	0	0	0	0	0	0	0	-15.5%	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	1	1	1	0	0	3.6%	1.1%	-1.3%	-3.8%	-6.9%	-11.0%
Gas	0	0	1	1	1	1	0	5.4%	4.5%	2.4%	1.1%	-3.2%	-9.3%
Electricity	0	1	2	2	2	2	2	7.8%	5.6%	1.9%	1.0%	0.5%	1.1%
Heat	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	14.4%	7.5%	4.0%
Biomass & Other	2	3	3	3	3	3	3	3.7%	0.6%	0.4%	0.3%	0.1%	-0.8%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4.2%</b>	<b>4.1%</b>	<b>-0.1%</b>	<b>1.2%</b>	<b>0.8%</b>	<b>0.6%</b>
Coal	0	0	0	0	0	0	0	-13.4%	-8.8%	-5.1%	-2.8%	n.s.	n.s.
Oil	0	0	0	0	0	0	0	8.3%	5.0%	-0.3%	-0.7%	-4.1%	-4.3%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	5.7%	-6.8%	7.4%	7.4%	6.9%	3.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	11.9%	3.7%
<b>Transport</b>	<b>3</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>8</b>	<b>6</b>	<b>6.4%</b>	<b>2.3%</b>	<b>1.6%</b>	<b>0.7%</b>	<b>-0.9%</b>	<b>-2.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	6	7	8	8	6	3	6.4%	2.3%	1.3%	-0.6%	-2.7%	-5.1%
Gas	0	0	0	0	0	0	0	3.5%	8.5%	21.4%	13.9%	1.0%	-5.2%
Electricity	0	0	0	0	0	1	2	0.4%	7.0%	3.8%	24.6%	8.2%	3.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	12.9%	7.6%	4.6%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>6.2%</b>	<b>1.6%</b>	<b>5.6%</b>	<b>1.3%</b>	<b>0.0%</b>	<b>0.5%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Mexico	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	86	103	119	135	148	158	164	1.8%	1.4%	1.3%	0.9%	0.6%	0.4%
GDP per capita (ppp, k\$'05)	10	12	12	15	18	23	30	1.7%	0.3%	1.6%	2.3%	2.5%	2.4%
GDP per capita (mer, k\$'05)	7	8	8	9	12	15	19	1.7%	0.3%	1.5%	2.3%	2.5%	2.4%
Share Value Added - Agriculture (%)	8	3	3	3	3	3	3	-7.8%	-0.1%	-0.3%	-0.9%	-0.8%	-0.6%
Share Value Added - Industry (%)	28	36	35	35	34	33	31	2.3%	-0.3%	0.1%	-0.3%	-0.5%	-0.6%
Share Value Added - Services (%)	64	61	62	61	63	65	67	-0.5%	0.2%	-0.1%	0.2%	0.3%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	15	18	23	-4.2%	5.6%	-0.1%	1.4%	2.0%	2.3%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	17	26	20	23	39	35	32	4.7%	-2.5%	1.3%	5.4%	-1.2%	-0.7%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	505	602	737	739	613	408	154	1.8%	2.1%	0.0%	-1.8%	-4.0%	-9.3%
Total GHG (excl. sinks)	518	626	750	739	713	532	321	1.9%	1.8%	-0.1%	-0.4%	-2.9%	-4.9%
Total GHG (energy, industry, agriculture)	466	573	713	726	713	519	321	2.1%	2.2%	0.2%	-0.2%	-3.1%	-4.7%
CO <sub>2</sub>	305	394	471	504	527	385	242	2.6%	1.8%	0.7%	0.5%	-3.1%	-4.5%
CH <sub>4</sub>	103	118	166	142	115	74	43	1.3%	3.4%	-1.5%	-2.1%	-4.3%	-5.2%
N <sub>2</sub> O	56	58	69	72	68	57	31	0.3%	1.7%	0.4%	-0.6%	-1.8%	-5.8%
F gases	1	3	8	7	3	4	5	7.9%	10.1%	-1.0%	-8.1%	1.8%	2.1%
Total GHG from Energy and Industry	373	486	621	625	622	444	274	2.7%	2.5%	0.1%	0.0%	-3.3%	-4.7%
CO <sub>2</sub> Emissions from Fuel Comb.	283	359	431	460	480	342	220	2.4%	1.9%	0.7%	0.4%	-3.3%	-4.3%
Power generation/District heating	63	112	122	146	183	95	42	5.9%	0.9%	1.8%	2.3%	-6.3%	-7.9%
Industry	64	62	55	67	62	54	52	-0.4%	-1.2%	2.0%	-0.7%	-1.4%	-0.4%
Buildings	24	31	28	26	21	14	8	2.5%	-1.1%	-0.6%	-2.1%	-4.2%	-5.0%
Agriculture	5	7	9	10	9	6	4	2.6%	2.6%	1.0%	-0.9%	-3.8%	-3.9%
Transport	83	104	148	142	129	108	69	2.3%	3.6%	-0.5%	-1.0%	-1.7%	-4.3%
Other	43	43	68	69	75	65	44	0.0%	4.8%	0.1%	0.9%	-1.5%	-3.8%
CO <sub>2</sub> captured (CCS)	0	0	0	0	9	93	155	n.s.	n.s.	n.s.	n.s.	26.9%	5.3%
Coal	0	0	0	0	6	52	72	n.s.	n.s.	n.s.	n.s.	23.7%	3.2%
Gas	0	0	0	0	2	36	58	n.s.	n.s.	n.s.	n.s.	31.4%	4.9%
Biomass	0	0	0	0	0	5	25	n.s.	n.s.	n.s.	18.0%	n.s.	18.4%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	186	227	219	233	216	158	178	2.0%	-0.3%	0.6%	-0.8%	-3.1%	1.2%
Coal	3	6	7	8	9	10	11	6.6%	1.2%	1.2%	2.1%	1.2%	0.9%
Oil	145	170	146	130	105	7	0	1.6%	-1.5%	-1.2%	-2.1%	-24.2%	n.s.
Natural gas	23	32	48	68	48	42	39	3.4%	4.2%	3.6%	-3.5%	-1.1%	-0.8%
Biomass	9	9	8	9	16	27	29	0.4%	-0.7%	0.5%	6.3%	5.3%	0.7%
Nuclear <sup>1</sup>	1	2	2	3	10	26	39	10.8%	-3.3%	5.3%	13.9%	10.6%	4.0%
Hydro	2	3	3	3	4	4	4	3.5%	1.1%	0.8%	0.4%	0.2%	0.1%
Other renewables	4	5	6	13	25	41	55	1.5%	1.5%	8.6%	6.3%	5.3%	3.0%
Net Imports	-67	-81	-42	-30	24	108	95						
Coal	2	2	4	7	10	10	10						
Oil	-69	-80	-51	-39	-21	60	46						
Natural gas	1	-3	6	1	34	36	38						
Biomass	0	0	0	1	1	1	0						
Biofuels	0	0	0	0	0	1	1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	119	146	177	203	240	266	273	2.1%	1.9%	1.4%	1.7%	1.0%	0.3%
Coal	5	8	10	15	19	21	21	5.5%	2.5%	3.7%	2.4%	0.9%	0.2%
Oil	76	90	95	90	84	67	46	1.8%	0.5%	-0.5%	-0.8%	-2.2%	-3.6%
Natural gas	23	29	53	69	82	78	77	2.3%	6.3%	2.6%	1.8%	-0.4%	-0.2%
Biomass	9	9	8	10	18	28	29	0.4%	-0.7%	1.7%	5.9%	4.7%	0.5%
Nuclear <sup>1</sup>	1	2	2	3	10	26	39	10.8%	-3.3%	5.3%	13.9%	10.6%	4.0%
Hydro	2	3	3	3	4	4	4	3.5%	1.1%	0.8%	0.4%	0.2%	0.1%
Other renewables	4	5	6	13	25	41	55	1.5%	1.5%	8.6%	6.3%	5.3%	3.0%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	119	146	177	203	240	266	273	2.1%	1.9%	1.4%	1.7%	1.0%	0.3%
Energy for Power Generation	28	48	56	74	109	140	167	5.5%	1.5%	2.9%	3.9%	2.5%	1.8%
Other Energy Transformation & Losses	15	14	26	32	39	44	45	-1.1%	6.4%	2.3%	1.9%	1.2%	0.2%
Final consumption	84	99	114	124	135	143	139	1.6%	1.4%	0.8%	0.8%	0.6%	-0.3%
Steel, Non-Met. Minerals and Chem.	15	14	12	12	11	11	10	-0.6%	-1.6%	0.1%	-1.0%	-0.4%	-0.8%
Other Industry	12	14	16	26	31	37	41	2.1%	1.0%	5.1%	1.9%	1.6%	1.0%
Non-Energy Use	9	10	8	7	7	8	7	0.8%	-1.9%	-2.1%	0.9%	0.6%	-1.2%
Residential	16	18	18	18	18	18	16	1.4%	-0.1%	-0.2%	0.5%	-0.2%	-1.1%
Services	2	3	5	6	9	11	13	4.7%	3.1%	3.3%	3.2%	2.1%	1.9%
Agriculture	2	3	4	4	5	5	6	2.4%	2.2%	1.5%	1.4%	1.3%	1.1%
Road	27	34	50	49	51	52	45	2.3%	4.0%	-0.2%	0.4%	0.2%	-1.4%
Rail	1	1	1	1	1	1	1	-1.0%	0.5%	1.3%	1.4%	1.3%	1.3%
Aviation	0	0	0	0	0	0	0	n.s.	1.1%	-7.9%	2.6%	1.4%	-0.6%
Other Transport	0	1	1	1	1	1	1	11.4%	-5.6%	0.5%	1.4%	-1.4%	-2.1%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Mexico	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>21</b>	<b>38</b>	<b>45</b>	<b>55</b>	<b>71</b>	<b>69</b>	<b>69</b>	<b>6.1%</b>	<b>1.8%</b>	<b>2.0%</b>	<b>2.6%</b>	<b>-0.3%</b>	<b>0.0%</b>
Coal	2	5	8	11	15	17	18	10.0%	5.3%	3.8%	3.1%	1.2%	0.5%
Oil	15	23	10	7	9	6	3	4.3%	-7.9%	-4.1%	3.6%	-4.4%	-5.3%
Gas	3	9	25	34	42	38	38	9.7%	11.3%	3.0%	2.1%	-0.9%	-0.2%
Biomass & Waste	0	1	1	2	3	5	7	n.s.	4.1%	4.3%	5.0%	6.1%	3.6%
Other	0	1	1	1	1	2	2	1.4%	1.2%	3.6%	5.3%	3.3%	1.3%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>116</b>	<b>204</b>	<b>271</b>	<b>371</b>	<b>546</b>	<b>729</b>	<b>935</b>	<b>5.8%</b>	<b>2.9%</b>	<b>3.2%</b>	<b>3.9%</b>	<b>2.9%</b>	<b>2.5%</b>
Coal	8	19	33	48	70	82	88	9.6%	5.3%	3.9%	3.8%	1.6%	0.7%
of which CCS	0	0	0	0	5	56	80	n.s.	n.s.	n.s.	n.s.	26.6%	3.8%
Oil	62	94	44	28	40	25	15	4.3%	-7.4%	-4.5%	3.6%	-4.3%	-5.1%
Gas	14	41	141	174	216	210	222	11.1%	13.0%	2.1%	2.2%	-0.3%	0.6%
of which CCS	0	0	0	0	6	95	156	n.s.	n.s.	n.s.	n.s.	32.3%	5.1%
Biomass & Waste	0	2	3	3	11	23	36	n.s.	4.9%	0.1%	15.0%	7.8%	4.4%
of which CCS	0	0	0	0	0	2	12	n.s.	n.s.	n.s.	n.s.	n.s.	17.6%
Nuclear	3	8	6	10	38	107	157	10.8%	-3.3%	5.4%	14.5%	10.7%	3.9%
Hydro	23	33	37	40	42	43	43	3.5%	1.1%	0.8%	0.4%	0.2%	0.1%
Wind	0	0	1	46	74	127	177	34.2%	50.8%	44.7%	4.8%	5.5%	3.4%
Solar	0	0	0	13	39	89	165	19.9%	15.8%	n.s.	11.3%	8.6%	6.3%
Other	5	6	7	9	16	23	32	1.4%	1.2%	3.7%	5.4%	3.8%	3.2%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>27</b>	<b>42</b>	<b>62</b>	<b>98</b>	<b>137</b>	<b>192</b>	<b>273</b>	<b>4.6%</b>	<b>3.9%</b>	<b>4.6%</b>	<b>3.5%</b>	<b>3.4%</b>	<b>3.6%</b>
Coal	1	5	6	7	10	12	14	15.6%	1.7%	1.6%	3.6%	1.3%	2.2%
of which CCS	0	0	0	0	1	7	12	n.s.	n.s.	n.s.	n.s.	26.9%	5.2%
Oil	12	16	14	10	8	5	5	2.9%	-1.4%	-3.4%	-2.4%	-4.8%	0.5%
Gas	5	9	28	36	41	37	47	7.1%	11.7%	2.5%	1.5%	-1.1%	2.3%
of which CCS	0	0	0	0	1	12	26	n.s.	n.s.	n.s.	n.s.	32.8%	7.5%
Biomass & Waste	0	0	0	0	1	3	5	n.s.	1.2%	-0.9%	13.7%	7.8%	4.4%
of which CCS	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	n.s.	17.6%
Nuclear	1	1	1	1	5	14	20	7.7%	0.0%	-0.1%	14.3%	10.5%	3.7%
Hydro	8	10	12	14	15	15	15	2.1%	1.8%	2.0%	0.4%	0.2%	0.1%
Wind	0	0	1	20	32	53	72	n.s.	n.s.	44.4%	4.6%	5.3%	3.1%
Solar	0	0	0	8	23	50	91	19.9%	16.4%	n.s.	11.1%	8.1%	6.1%
Other	1	1	1	1	2	3	4	2.0%	1.2%	2.9%	5.8%	2.3%	3.6%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>84</b>	<b>99</b>	<b>114</b>	<b>124</b>	<b>135</b>	<b>143</b>	<b>139</b>	<b>1.6%</b>	<b>1.4%</b>	<b>0.8%</b>	<b>0.8%</b>	<b>0.6%</b>	<b>-0.3%</b>
Coal	2	2	2	4	3	2	2	0.6%	-0.1%	6.1%	-1.0%	-3.2%	-0.4%
Oil	51	62	74	70	61	49	34	1.9%	1.8%	-0.6%	-1.3%	-2.1%	-3.7%
Gas	14	13	13	17	18	19	19	-0.9%	-0.2%	2.6%	1.0%	0.4%	-0.2%
Electricity	9	14	18	26	38	51	65	4.9%	2.5%	3.7%	3.9%	2.9%	2.5%
Heat	0	0	0	0	1	4	4	9.6%	10.4%	5.4%	21.6%	11.0%	1.2%
Biomass & Other	9	8	7	8	13	18	16	-0.4%	-1.2%	0.6%	5.2%	3.5%	-1.4%
Share of Renewables <sup>3</sup> (%)	14%	12%	10%	14%	24%	38%	50%	-1.3%	-2.0%	3.3%	5.5%	4.9%	2.7%
<b>Industry (incl. non-energy use)</b>	<b>36</b>	<b>38</b>	<b>36</b>	<b>45</b>	<b>50</b>	<b>55</b>	<b>57</b>	<b>0.7%</b>	<b>-0.6%</b>	<b>2.2%</b>	<b>1.1%</b>	<b>1.0%</b>	<b>0.4%</b>
Coal	2	2	2	4	3	2	2	0.6%	-0.1%	6.1%	-1.0%	-3.2%	-0.4%
Oil	14	14	11	11	11	10	9	0.1%	-2.2%	-0.2%	-0.3%	-0.4%	-0.7%
Gas	13	12	12	14	13	13	14	-0.9%	-0.4%	1.7%	-0.6%	-0.1%	0.6%
Electricity	5	9	10	15	19	24	29	6.4%	1.5%	4.0%	2.8%	2.2%	2.0%
Heat	0	0	0	0	0	0	0	n.s.	10.4%	4.9%	-0.2%	-0.3%	-0.2%
Biomass & Other	2	1	1	2	3	6	3	-3.4%	-2.9%	4.5%	8.0%	5.1%	-7.5%
<b>Buildings</b>	<b>18</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>27</b>	<b>29</b>	<b>29</b>	<b>1.8%</b>	<b>0.5%</b>	<b>0.6%</b>	<b>1.3%</b>	<b>0.6%</b>	<b>0.1%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	7	9	8	7	5	3	1	2.8%	-1.5%	-1.6%	-3.3%	-6.4%	-7.0%
Gas	1	1	1	2	2	3	2	-1.6%	3.4%	7.3%	2.4%	0.1%	-2.8%
Electricity	3	5	7	10	13	16	20	3.2%	4.5%	3.1%	2.9%	2.4%	2.3%
Heat	0	0	0	0	1	4	4	9.6%	10.4%	5.4%	22.0%	11.1%	1.2%
Biomass & Other	7	7	6	5	5	4	1	0.3%	-0.9%	-1.6%	0.4%	-4.1%	-9.1%
<b>Agriculture</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>2.4%</b>	<b>2.2%</b>	<b>1.5%</b>	<b>1.4%</b>	<b>1.3%</b>	<b>1.1%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	2	3	3	3	2	1	2.6%	2.6%	1.0%	-0.9%	-3.8%	-3.9%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	1	1	1	1	1	2	2	1.7%	0.9%	2.8%	3.3%	3.5%	2.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	2	2	n.s.	n.s.	n.s.	34.7%	11.2%	3.8%
<b>Transport</b>	<b>29</b>	<b>36</b>	<b>52</b>	<b>51</b>	<b>53</b>	<b>54</b>	<b>47</b>	<b>2.4%</b>	<b>3.7%</b>	<b>-0.2%</b>	<b>0.4%</b>	<b>0.2%</b>	<b>-1.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	28	36	52	49	43	35	22	2.4%	3.7%	-0.6%	-1.4%	-2.0%	-4.6%
Gas	0	0	0	1	3	4	3	n.s.	7.8%	50.0%	14.7%	2.8%	-1.8%
Electricity	0	0	0	1	4	9	13	3.2%	0.8%	17.8%	23.6%	6.9%	4.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	3	7	9	n.s.	n.s.	n.s.	15.6%	8.1%	2.7%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>15</b>	<b>14</b>	<b>26</b>	<b>32</b>	<b>39</b>	<b>44</b>	<b>45</b>	<b>-1.1%</b>	<b>6.4%</b>	<b>2.3%</b>	<b>1.9%</b>	<b>1.2%</b>	<b>0.2%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



United States	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	253	283	310	334	356	374	389	1.1%	0.9%	0.7%	0.6%	0.5%	0.4%
GDP per capita (ppp, k\$'05)	33	41	44	51	58	65	73	2.3%	0.7%	1.5%	1.3%	1.2%	1.1%
GDP per capita (mer, k\$'05)	33	41	44	51	58	65	73	2.3%	0.7%	1.5%	1.3%	1.2%	1.1%
Share Value Added - Agriculture (%)	2	1	1	1	1	1	1	-5.3%	0.0%	-0.2%	-0.6%	-0.5%	-0.4%
Share Value Added - Industry (%)	27	22	19	18	17	16	15	-1.7%	-1.7%	-0.4%	-0.7%	-0.7%	-0.8%
Share Value Added - Services (%)	71	76	80	81	82	83	84	0.7%	0.4%	0.1%	0.2%	0.2%	0.1%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	15	18	23	-4.2%	5.6%	-0.1%	1.4%	2.0%	2.3%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	17	26	20	23	39	35	32	4.7%	-2.5%	1.3%	5.4%	-1.2%	-0.7%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	5 339	6 274	5 798	5 319	3 623	2 216	815	1.6%	-0.8%	-0.9%	-3.8%	-4.8%	-9.5%
Total GHG (excl. sinks)	6 162	6 958	6 756	6 188	4 405	2 851	1 349	1.2%	-0.3%	-0.9%	-3.3%	-4.3%	-7.2%
Total GHG (energy, industry, agriculture)	6 162	6 958	6 756	6 188	4 405	2 851	1 349	1.2%	-0.3%	-0.9%	-3.3%	-4.3%	-7.2%
CO <sub>2</sub>	5 044	5 849	5 622	5 175	3 616	2 171	750	1.5%	-0.4%	-0.8%	-3.5%	-5.0%	-10.1%
CH <sub>4</sub>	633	588	581	472	338	254	189	-0.7%	-0.1%	-2.0%	-3.3%	-2.8%	-2.9%
N <sub>2</sub> O	395	384	404	399	385	362	339	-0.3%	0.5%	-0.1%	-0.4%	-0.6%	-0.7%
F gases	90	136	150	142	67	64	70	4.2%	1.0%	-0.5%	-7.3%	-0.4%	0.8%
Total GHG from Energy and Industry	5 688	6 483	6 222	5 670	3 908	2 392	929	1.3%	-0.4%	-0.9%	-3.7%	-4.8%	-9.0%
CO <sub>2</sub> Emissions from Fuel Comb.	4 915	5 715	5 497	5 046	3 503	2 092	716	1.5%	-0.4%	-0.9%	-3.6%	-5.0%	-10.2%
Power generation/District heating	1 866	2 372	2 332	1 786	1 059	437	11	2.4%	-0.2%	-2.6%	-5.1%	-8.5%	-30.6%
Industry	670	638	525	535	419	259	86	-0.5%	-1.9%	0.2%	-2.4%	-4.7%	-10.5%
Buildings	544	602	545	562	447	280	110	1.0%	-1.0%	0.3%	-2.3%	-4.6%	-8.9%
Agriculture	46	45	53	57	44	28	18	-0.2%	1.8%	0.7%	-2.6%	-4.3%	-4.4%
Transport	1 424	1 713	1 677	1 652	1 187	869	431	1.9%	-0.2%	-0.1%	-3.3%	-3.1%	-6.8%
Other	366	346	364	453	347	219	60	-0.6%	0.5%	2.2%	-2.6%	-4.5%	-12.1%
CO <sub>2</sub> captured (CCS)	0	0	0	0	74	532	1 010	n.s.	n.s.	n.s.	n.s.	21.7%	6.6%
Coal	0	0	0	0	43	264	320	n.s.	n.s.	n.s.	n.s.	19.8%	1.9%
Gas	0	0	0	0	31	177	283	n.s.	n.s.	n.s.	n.s.	19.0%	4.8%
Biomass	0	0	0	0	0	91	407	n.s.	n.s.	n.s.	0.3%	n.s.	16.2%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	1 671	1 730	1 813	2 036	2 012	1 576	1 544	0.4%	0.5%	1.2%	-0.1%	-2.4%	-0.2%
Coal	529	575	557	409	340	288	218	0.8%	-0.3%	-3.0%	-1.9%	-1.6%	-2.7%
Oil	440	381	373	518	473	1	0	-1.4%	-0.2%	3.4%	-0.9%	-46.3%	n.s.
Natural gas	419	448	500	681	519	364	286	0.7%	1.1%	3.1%	-2.7%	-3.5%	-2.4%
Biomass	82	76	112	108	163	258	328	-0.8%	3.9%	-0.4%	4.2%	4.7%	2.4%
Nuclear <sup>1</sup>	162	211	222	212	333	420	405	2.7%	0.5%	-0.4%	4.6%	2.3%	-0.4%
Hydro	25	24	25	25	26	27	27	-0.3%	0.2%	0.2%	0.3%	0.3%	0.2%
Other renewables	14	15	25	82	157	219	280	0.3%	5.4%	12.8%	6.7%	3.4%	2.5%
Net Imports	292	559	441	264	142	503	343						
Coal	- 62	- 34	- 49	- 106	- 163	- 143	- 116						
Oil	332	490	433	249	97	427	244						
Natural gas	21	100	56	86	82	63	56						
Biomass	0	0	0	29	114	148	157						
Biofuels	0	0	- 1	3	8	4	- 3						
Electricity	0	3	2	4	4	4	4						
Primary Energy Demand <sup>2</sup>	1 962	2 290	2 254	2 300	2 153	2 080	1 888	1.6%	-0.2%	0.2%	-0.7%	-0.3%	-1.0%
Coal	466	542	508	303	176	145	103	1.5%	-0.6%	-5.0%	-5.3%	-2.0%	-3.4%
Oil	772	871	805	767	571	428	244	1.2%	-0.8%	-0.5%	-2.9%	-2.8%	-5.5%
Natural gas	441	548	556	767	601	427	342	2.2%	0.2%	3.3%	-2.4%	-3.4%	-2.2%
Biomass	82	76	112	137	277	406	485	-0.8%	3.9%	2.0%	7.3%	3.9%	1.8%
Nuclear <sup>1</sup>	162	211	222	212	333	420	405	2.7%	0.5%	-0.4%	4.6%	2.3%	-0.4%
Hydro	25	24	25	25	26	27	27	-0.3%	0.2%	0.2%	0.3%	0.3%	0.2%
Other renewables	14	15	25	82	157	219	280	0.3%	5.4%	12.8%	6.7%	3.4%	2.5%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	1 962	2 290	2 254	2 300	2 153	2 080	1 888	1.6%	-0.2%	0.2%	-0.7%	-0.3%	-1.0%
Energy for Power Generation	754	931	957	923	959	1 085	1 192	2.1%	0.3%	-0.4%	0.4%	1.2%	0.9%
Other Energy Transformation & Losses	137	132	166	229	254	232	203	-0.3%	2.3%	3.3%	1.0%	-0.9%	-1.3%
Final consumption	1 300	1 538	1 489	1 529	1 390	1 283	1 101	1.7%	-0.3%	0.3%	-0.9%	-0.8%	-1.5%
Steel, Non-Met. Minerals and Chem.	127	152	97	92	71	58	45	1.8%	-4.4%	-0.6%	-2.6%	-1.9%	-2.4%
Other Industry	181	185	169	197	188	180	167	0.2%	-0.9%	1.6%	-0.5%	-0.4%	-0.7%
Non-Energy Use	119	153	135	120	116	111	92	2.5%	-1.2%	-1.2%	-0.3%	-0.4%	-1.8%
Residential	224	265	268	278	259	240	211	1.7%	0.1%	0.4%	-0.7%	-0.8%	-1.3%
Services	157	193	217	247	255	261	259	2.1%	1.2%	1.3%	0.3%	0.2%	-0.1%
Agriculture	14	14	18	20	21	22	23	-0.2%	2.2%	1.4%	0.5%	0.4%	0.3%
Road	397	493	522	496	397	335	240	2.2%	0.6%	-0.5%	-2.2%	-1.7%	-3.3%
Rail	11	10	9	13	14	14	13	-0.5%	-1.3%	3.9%	0.4%	-0.2%	-0.6%
Aviation	64	68	49	56	60	55	45	0.7%	-3.2%	1.4%	0.6%	-0.9%	-2.0%
Other Transport	6	4	4	9	10	8	6	-4.3%	0.5%	7.8%	0.6%	-2.1%	-2.6%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

United States	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>554</b>	<b>681</b>	<b>686</b>	<b>604</b>	<b>443</b>	<b>420</b>	<b>480</b>	<b>2.1%</b>	<b>0.1%</b>	<b>-1.3%</b>	<b>-3.1%</b>	<b>-0.5%</b>	<b>1.3%</b>
Coal	392	492	469	261	137	107	75	2.3%	-0.5%	-5.7%	-6.2%	-2.4%	-3.5%
Oil	27	30	11	16	11	14	13	0.8%	-9.6%	4.3%	-3.8%	2.1%	-0.8%
Gas	93	137	185	298	230	176	204	3.9%	3.1%	4.9%	-2.5%	-2.7%	1.5%
Biomass & Waste	40	21	20	25	59	117	183	-6.0%	-0.5%	2.1%	9.0%	7.1%	4.5%
Other	1	1	2	4	5	6	6	-0.9%	1.9%	9.4%	3.7%	1.1%	0.0%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>3 211</b>	<b>4 053</b>	<b>4 372</b>	<b>4 607</b>	<b>4 985</b>	<b>5 582</b>	<b>6 409</b>	<b>2.4%</b>	<b>0.8%</b>	<b>0.5%</b>	<b>0.8%</b>	<b>1.1%</b>	<b>1.4%</b>
Coal	1 700	2 129	1 994	1 114	593	484	356	2.3%	-0.7%	-5.7%	-6.1%	-2.0%	-3.0%
of which CCS	0	0	0	0	40	266	354	n.s.	n.s.	n.s.	n.s.	21.0%	2.9%
Oil	131	118	48	68	47	58	54	-1.0%	-8.6%	3.5%	-3.6%	2.1%	-0.7%
Gas	382	634	1 018	1 702	1 376	992	1 173	5.2%	4.8%	5.3%	-2.1%	-3.2%	1.7%
of which CCS	0	0	0	0	80	453	745	n.s.	n.s.	n.s.	n.s.	18.9%	5.1%
Biomass & Waste	79	72	75	95	254	534	863	-0.9%	0.5%	2.3%	10.3%	7.7%	4.9%
of which CCS	0	0	0	0	0	69	307	n.s.	n.s.	n.s.	n.s.	n.s.	16.1%
Nuclear	612	798	839	803	1 296	1 669	1 609	2.7%	0.5%	-0.4%	4.9%	2.6%	-0.4%
Hydro	289	280	286	292	300	308	314	-0.3%	0.2%	0.2%	0.3%	0.3%	0.2%
Wind	3	6	88	422	890	1 018	1 076	6.3%	31.5%	17.0%	7.7%	1.4%	0.6%
Solar	1	1	6	68	166	445	880	0.6%	24.1%	27.1%	9.4%	10.4%	7.0%
Other	16	15	18	43	63	73	84	-0.9%	1.9%	9.4%	3.8%	1.5%	1.3%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>778</b>	<b>890</b>	<b>1 041</b>	<b>1 118</b>	<b>1 385</b>	<b>1 458</b>	<b>1 699</b>	<b>1.4%</b>	<b>1.6%</b>	<b>0.7%</b>	<b>2.2%</b>	<b>0.5%</b>	<b>1.5%</b>
Coal	271	321	319	208	119	99	52	1.7%	-0.1%	-4.2%	-5.4%	-1.8%	-6.3%
of which CCS	0	0	0	0	5	36	52	n.s.	n.s.	n.s.	n.s.	21.0%	3.6%
Oil	82	130	56	28	24	20	16	4.7%	-8.1%	-6.8%	-1.4%	-1.7%	-2.0%
Gas	214	221	407	438	453	254	250	0.3%	6.3%	0.7%	0.3%	-5.6%	-0.2%
of which CCS	0	0	0	0	10	60	110	n.s.	n.s.	n.s.	n.s.	19.1%	6.3%
Biomass & Waste	11	15	12	13	36	73	115	3.2%	-2.6%	1.1%	10.6%	7.4%	4.6%
of which CCS	0	0	0	0	0	9	39	n.s.	n.s.	n.s.	n.s.	n.s.	15.8%
Nuclear	102	98	101	99	159	205	198	-0.4%	0.3%	-0.3%	4.9%	2.6%	-0.4%
Hydro	92	99	101	103	106	109	111	0.7%	0.2%	0.2%	0.3%	0.2%	0.2%
Wind	2	2	39	182	377	421	426	4.5%	32.3%	16.6%	7.6%	1.1%	0.1%
Solar	1	1	4	43	102	268	519	1.3%	17.0%	25.8%	9.1%	10.1%	6.9%
Other	3	3	2	6	8	9	13	0.5%	-1.5%	9.0%	3.1%	1.9%	3.0%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>1 300</b>	<b>1 538</b>	<b>1 489</b>	<b>1 529</b>	<b>1 390</b>	<b>1 283</b>	<b>1 101</b>	<b>1.7%</b>	<b>-0.3%</b>	<b>0.3%</b>	<b>-0.9%</b>	<b>-0.8%</b>	<b>-1.5%</b>
Coal	58	39	31	24	20	13	8	-3.8%	-2.4%	-2.4%	-1.9%	-4.1%	-4.3%
Oil	683	793	761	709	531	397	225	1.5%	-0.4%	-0.7%	-2.8%	-2.9%	-5.5%
Gas	288	345	295	345	274	180	78	1.8%	-1.6%	1.6%	-2.3%	-4.1%	-8.0%
Electricity	226	301	326	346	374	420	484	2.9%	0.8%	0.6%	0.8%	1.1%	1.4%
Heat	2	7	8	9	19	39	57	11.3%	1.3%	1.2%	7.6%	7.3%	3.8%
Biomass & Other	43	52	69	95	171	234	249	2.1%	2.8%	3.3%	6.0%	3.2%	0.6%
Share of Renewables <sup>3</sup> (%)	6%	6%	8%	12%	27%	45%	66%	-0.4%	2.8%	4.3%	8.8%	5.0%	4.0%
<b>Industry (incl. non-energy use)</b>	<b>427</b>	<b>490</b>	<b>402</b>	<b>409</b>	<b>374</b>	<b>349</b>	<b>305</b>	<b>1.4%</b>	<b>-2.0%</b>	<b>0.2%</b>	<b>-0.9%</b>	<b>-0.7%</b>	<b>-1.3%</b>
Coal	53	37	29	23	20	13	8	-3.6%	-2.3%	-2.2%	-1.7%	-4.1%	-4.3%
Oil	147	160	150	121	109	95	77	0.8%	-0.6%	-2.2%	-1.0%	-1.4%	-2.1%
Gas	124	155	111	142	108	70	32	2.3%	-3.3%	2.5%	-2.7%	-4.2%	-7.5%
Electricity	75	98	74	79	78	76	72	2.8%	-2.7%	0.5%	-0.1%	-0.3%	-0.5%
Heat	0	4	5	5	5	5	5	n.s.	2.2%	-0.7%	-0.2%	-0.3%	-0.2%
Biomass & Other	29	36	32	39	55	90	111	2.2%	-1.1%	2.0%	3.6%	5.0%	2.1%
<b>Buildings</b>	<b>381</b>	<b>458</b>	<b>485</b>	<b>525</b>	<b>514</b>	<b>501</b>	<b>469</b>	<b>1.8%</b>	<b>0.6%</b>	<b>0.8%</b>	<b>-0.2%</b>	<b>-0.3%</b>	<b>-0.6%</b>
Coal	5	2	2	1	0	0	0	-7.0%	-3.8%	-6.9%	-10.3%	-15.7%	-16.2%
Oil	45	48	36	32	35	28	12	0.5%	-2.8%	-1.1%	0.9%	-2.3%	-8.0%
Gas	164	189	182	196	143	82	31	1.5%	-0.4%	0.7%	-3.1%	-5.4%	-9.4%
Electricity	152	202	251	263	266	284	317	2.9%	2.2%	0.5%	0.1%	0.7%	1.1%
Heat	2	3	3	4	15	34	52	1.7%	-0.2%	4.1%	12.9%	9.0%	4.3%
Biomass & Other	14	13	12	29	54	73	57	-0.3%	-0.7%	8.9%	6.6%	2.9%	-2.3%
<b>Agriculture</b>	<b>14</b>	<b>14</b>	<b>18</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>-0.2%</b>	<b>2.2%</b>	<b>1.4%</b>	<b>0.5%</b>	<b>0.4%</b>	<b>0.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	14	14	16	17	13	8	5	-0.2%	1.1%	0.8%	-2.6%	-4.4%	-4.6%
Gas	0	0	1	1	1	1	1	n.s.	n.s.	-0.8%	-1.7%	-2.9%	-3.0%
Electricity	0	0	0	0	1	3	4	n.s.	n.s.	n.s.	20.6%	7.5%	3.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	2	6	10	13	n.s.	n.s.	15.8%	13.2%	5.9%	2.4%
<b>Transport</b>	<b>477</b>	<b>576</b>	<b>584</b>	<b>575</b>	<b>480</b>	<b>411</b>	<b>303</b>	<b>1.9%</b>	<b>0.1%</b>	<b>-0.2%</b>	<b>-1.8%</b>	<b>-1.6%</b>	<b>-3.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	477	572	559	540	374	266	131	1.8%	-0.2%	-0.4%	-3.6%	-3.4%	-6.8%
Gas	0	0	1	6	22	27	14	n.s.	10.2%	24.1%	14.4%	1.9%	-6.0%
Electricity	0	0	1	4	29	57	90	0.7%	3.6%	20.8%	23.1%	7.0%	4.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	3	24	26	55	62	68	n.s.	22.5%	0.7%	7.9%	1.1%	1.0%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>137</b>	<b>132</b>	<b>166</b>	<b>229</b>	<b>254</b>	<b>232</b>	<b>203</b>	<b>-0.3%</b>	<b>2.3%</b>	<b>3.3%</b>	<b>1.0%</b>	<b>-0.9%</b>	<b>-1.3%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Rest Central America	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	63	74	84	93	102	109	113	1.6%	1.3%	1.1%	0.9%	0.6%	0.4%
GDP per capita (ppp, k\$'05)	3	4	5	6	8	10	13	3.2%	2.7%	2.4%	2.8%	2.9%	2.8%
GDP per capita (mer, k\$'05)	3	3	4	5	6	8	11	1.7%	1.7%	1.9%	2.8%	2.9%	2.8%
Share Value Added - Agriculture (%)	8	5	6	5	4	3	3	-3.9%	0.3%	-1.6%	-2.0%	-1.6%	-1.2%
Share Value Added - Industry (%)	26	30	31	33	32	31	30	1.4%	0.6%	0.4%	-0.2%	-0.2%	-0.3%
Share Value Added - Services (%)	66	65	63	63	64	65	67	-0.2%	-0.3%	0.0%	0.2%	0.2%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	15	18	23	-4.2%	5.6%	-0.1%	1.4%	2.0%	2.3%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	17	26	20	23	39	35	32	4.7%	-2.5%	1.3%	5.4%	-1.2%	-0.7%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	287	304	341	401	276	189	116	0.6%	1.2%	1.6%	-3.7%	-3.7%	-4.7%
Total GHG (excl. sinks)	300	339	368	401	351	291	231	1.2%	0.8%	0.9%	-1.3%	-1.9%	-2.3%
Total GHG (energy, industry, agriculture)	173	213	272	322	351	288	128	2.1%	2.5%	1.7%	0.9%	-2.0%	-7.8%
CO <sub>2</sub>	100	137	182	224	259	223	76	3.3%	2.9%	2.1%	1.5%	-1.5%	-10.2%
CH <sub>4</sub>	48	51	64	68	64	44	34	0.6%	2.3%	0.6%	-0.5%	-3.8%	-2.6%
N <sub>2</sub> O	25	24	24	28	26	19	15	-0.7%	0.2%	1.4%	-0.6%	-3.0%	-2.3%
F gases	0	0	1	2	2	2	3	n.s.	16.9%	3.3%	-1.0%	0.9%	3.2%
Total GHG from Energy and Industry	122	164	222	266	300	252	100	3.0%	3.1%	1.8%	1.2%	-1.7%	-8.9%
CO <sub>2</sub> Emissions from Fuel Comb.	90	122	157	193	222	185	51	3.1%	2.6%	2.1%	1.4%	-1.8%	-12.0%
Power generation/District heating	23	37	52	53	58	33	-32	4.7%	3.5%	0.3%	0.8%	-5.4%	n.s.
Industry	26	31	41	62	78	69	34	2.0%	2.7%	4.3%	2.3%	-1.3%	-6.9%
Buildings	8	9	9	8	8	7	3	0.8%	-0.2%	-0.6%	-0.4%	-1.5%	-7.6%
Agriculture	2	1	1	1	1	1	0	-1.6%	-4.4%	-0.7%	0.3%	-3.4%	-3.8%
Transport	20	32	40	47	51	52	39	4.7%	2.5%	1.6%	0.7%	0.3%	-2.9%
Other	11	12	15	21	26	23	8	1.1%	1.8%	3.8%	2.0%	-1.1%	-10.5%
CO <sub>2</sub> captured (CCS)	0	0	0	0	1	25	85	n.s.	n.s.	n.s.	n.s.	38.9%	13.0%
Coal	0	0	0	0	1	14	15	n.s.	n.s.	n.s.	n.s.	32.5%	0.6%
Gas	0	0	0	0	0	2	3	n.s.	n.s.	n.s.	n.s.	50.4%	4.1%
Biomass	0	0	0	0	0	9	67	n.s.	n.s.	n.s.	n.s.	n.s.	22.7%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	33	43	70	62	59	67	90	2.7%	5.1%	-1.2%	-0.5%	1.2%	3.0%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	9	11	11	10	14	10	8	2.4%	0.3%	-0.9%	3.2%	-3.6%	-2.2%
Natural gas	4	13	38	17	2	3	4	11.6%	11.1%	-7.9%	-19.0%	4.1%	1.9%
Biomass	18	16	16	25	24	30	48	-1.5%	0.5%	4.3%	-0.5%	2.4%	5.0%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	23.3%	19.6%
Hydro	1	1	2	2	2	3	3	2.8%	3.4%	0.7%	1.0%	0.8%	0.8%
Other renewables	1	2	3	8	17	21	27	9.2%	6.1%	10.7%	7.4%	2.4%	2.2%
Net Imports	18	20	9	41	68	71	49						
Coal	0	0	2	3	7	9	6						
Oil	17	23	25	27	22	26	23						
Natural gas	0	-4	-18	17	43	40	24						
Biomass	0	0	0	-7	-4	-4	-4						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	51	62	79	103	127	138	138	2.0%	2.4%	2.6%	2.2%	0.8%	0.0%
Coal	0	0	2	3	7	9	6	5.2%	15.5%	7.4%	8.6%	1.9%	-4.0%
Oil	26	34	36	37	36	36	30	2.8%	0.6%	0.2%	-0.4%	0.0%	-1.6%
Natural gas	5	9	20	34	45	43	27	6.6%	8.2%	5.5%	2.9%	-0.5%	-4.3%
Biomass	18	16	16	18	20	26	44	-1.5%	0.5%	1.1%	0.8%	2.9%	5.4%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	23.3%	19.6%
Hydro	1	1	2	2	2	3	3	2.8%	3.4%	0.7%	1.0%	0.8%	0.8%
Other renewables	1	2	3	8	17	21	27	9.2%	6.1%	10.7%	7.4%	2.4%	2.2%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	51	62	79	103	127	138	138	2.0%	2.4%	2.6%	2.2%	0.8%	0.0%
Energy for Power Generation	11	16	24	32	42	47	56	4.3%	4.0%	2.8%	2.9%	1.1%	1.7%
Other Energy Transformation & Losses	6	6	6	9	12	14	15	-0.5%	-0.5%	4.6%	3.1%	1.6%	0.4%
Final consumption	38	45	56	72	87	96	95	1.8%	2.2%	2.5%	1.9%	1.0%	-0.2%
Steel, Non-Met. Minerals and Chem.	0	1	1	5	8	6	4	6.4%	4.9%	16.7%	4.2%	-3.6%	-4.2%
Other Industry	14	12	11	15	18	20	21	-0.9%	-1.0%	2.7%	1.8%	1.5%	0.5%
Non-Energy Use	3	6	11	15	20	24	24	8.1%	6.6%	3.0%	2.8%	2.0%	0.0%
Residential	11	12	16	16	17	18	17	1.4%	2.5%	0.4%	0.3%	0.4%	-0.5%
Services	2	2	3	4	5	6	7	1.8%	4.1%	1.8%	2.7%	2.3%	1.6%
Agriculture	1	1	0	1	1	1	1	-1.3%	-1.6%	2.5%	1.5%	1.5%	1.4%
Road	7	11	13	15	18	21	20	3.8%	1.5%	1.9%	1.7%	1.5%	-0.4%
Rail	0	0	0	0	0	0	0	-8.6%	10.0%	3.0%	2.1%	1.9%	1.6%
Aviation	0	0	0	0	0	1	1	4.7%	9.2%	1.2%	3.2%	2.8%	0.3%
Other Transport	1	0	0	0	1	1	1	-6.3%	1.5%	-0.7%	2.7%	0.5%	-1.3%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest Central America	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>9</b>	<b>13</b>	<b>19</b>	<b>21</b>	<b>23</b>	<b>23</b>	<b>26</b>	<b>4.0%</b>	<b>3.8%</b>	<b>1.0%</b>	<b>0.8%</b>	<b>0.0%</b>	<b>1.3%</b>
Coal	0	0	1	2	5	6	4	33.6%	14.9%	10.7%	8.1%	2.3%	-4.5%
Oil	6	10	13	10	8	6	3	4.4%	2.5%	-1.9%	-2.2%	-3.6%	-7.5%
Gas	1	2	4	5	6	5	4	5.6%	6.8%	3.0%	1.3%	-0.7%	-3.5%
Biomass & Waste	1	1	2	3	3	5	15	-1.9%	5.7%	5.1%	0.1%	4.6%	11.4%
Other	0	0	0	1	1	1	1	9.1%	5.5%	9.4%	6.3%	0.0%	0.8%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>43</b>	<b>68</b>	<b>94</b>	<b>118</b>	<b>158</b>	<b>216</b>	<b>289</b>	<b>4.8%</b>	<b>3.3%</b>	<b>2.2%</b>	<b>3.0%</b>	<b>3.2%</b>	<b>2.9%</b>
Coal	0	1	3	9	23	28	18	33.5%	14.7%	12.0%	9.1%	2.3%	-4.5%
of which CCS	0	0	0	0	0	14	15	n.s.	n.s.	n.s.	n.s.	42.5%	0.7%
Oil	24	40	47	46	36	25	11	5.4%	1.7%	-0.4%	-2.3%	-3.7%	-7.5%
Gas	4	7	14	20	23	24	19	6.6%	7.4%	3.6%	1.6%	0.3%	-2.4%
of which CCS	0	0	0	0	0	6	8	n.s.	n.s.	n.s.	n.s.	n.s.	3.9%
Biomass & Waste	2	2	3	4	4	19	73	-0.1%	4.7%	2.3%	0.7%	16.3%	14.3%
of which CCS	0	0	0	0	0	9	61	n.s.	n.s.	n.s.	n.s.	n.s.	20.9%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	13	17	23	25	27	30	32	2.8%	3.4%	0.7%	1.0%	0.8%	0.8%
Wind	0	0	1	4	17	36	56	n.s.	11.9%	22.4%	14.8%	8.0%	4.4%
Solar	0	0	0	2	13	38	61	n.s.	-3.4%	n.s.	20.3%	11.8%	4.7%
Other	1	2	3	8	15	15	19	9.1%	5.5%	9.4%	6.4%	0.4%	2.0%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>13</b>	<b>19</b>	<b>25</b>	<b>32</b>	<b>45</b>	<b>69</b>	<b>95</b>	<b>3.6%</b>	<b>2.9%</b>	<b>2.5%</b>	<b>3.5%</b>	<b>4.5%</b>	<b>3.2%</b>
Coal	0	0	0	1	3	4	4	5.6%	1.1%	10.2%	9.5%	3.3%	-1.3%
of which CCS	0	0	0	0	0	2	3	n.s.	n.s.	n.s.	n.s.	42.8%	4.6%
Oil	8	11	15	16	14	11	7	3.6%	2.6%	0.9%	-1.4%	-2.0%	-5.1%
Gas	1	2	3	3	4	4	5	4.3%	3.6%	1.7%	1.0%	1.3%	1.3%
of which CCS	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	n.s.	7.3%
Biomass & Waste	0	1	1	1	1	3	11	6.1%	5.1%	0.8%	-1.9%	13.3%	15.7%
of which CCS	0	0	0	0	0	1	9	n.s.	n.s.	n.s.	n.s.	n.s.	22.6%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	3	4	5	6	6	7	7	2.3%	2.9%	1.3%	1.0%	0.8%	0.8%
Wind	0	0	0	2	7	15	23	n.s.	14.9%	21.8%	14.5%	7.9%	4.3%
Solar	0	0	0	1	8	23	35	n.s.	-3.4%	n.s.	20.1%	11.4%	4.6%
Other	0	0	1	1	2	2	3	9.3%	2.4%	8.9%	5.1%	1.0%	2.3%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>38</b>	<b>45</b>	<b>56</b>	<b>72</b>	<b>87</b>	<b>96</b>	<b>95</b>	<b>1.8%</b>	<b>2.2%</b>	<b>2.5%</b>	<b>1.9%</b>	<b>1.0%</b>	<b>-0.2%</b>
Coal	0	0	1	1	3	3	2	-1.0%	12.3%	6.9%	8.6%	-0.1%	-3.0%
Oil	17	21	22	25	25	28	26	2.2%	0.8%	0.9%	0.3%	0.9%	-0.7%
Gas	3	6	12	22	31	29	18	8.1%	7.0%	6.1%	3.2%	-0.5%	-4.5%
Electricity	3	5	7	8	11	16	21	4.6%	3.7%	2.2%	3.1%	3.2%	2.9%
Heat	0	0	0	1	2	2	3	n.s.	n.s.	n.s.	6.5%	2.7%	1.8%
Biomass & Other	15	14	14	14	15	19	25	-1.2%	0.4%	0.2%	0.6%	2.3%	2.9%
Share of Renewables <sup>3</sup> (%)	45%	36%	35%	31%	34%	48%	76%	-2.1%	-0.5%	-1.1%	0.9%	3.4%	4.8%
<b>Industry (incl. non-energy use)</b>	<b>17</b>	<b>19</b>	<b>23</b>	<b>35</b>	<b>45</b>	<b>50</b>	<b>49</b>	<b>1.3%</b>	<b>2.1%</b>	<b>4.1%</b>	<b>2.6%</b>	<b>0.9%</b>	<b>-0.2%</b>
Coal	0	0	1	1	3	3	2	-1.0%	12.3%	6.9%	8.6%	-0.1%	-3.0%
Oil	7	7	6	7	8	11	14	0.5%	-1.0%	1.1%	1.5%	3.1%	2.2%
Gas	3	6	12	21	28	26	16	8.0%	7.2%	5.7%	2.7%	-0.8%	-4.5%
Electricity	1	2	2	3	4	6	7	4.5%	2.7%	3.8%	3.2%	2.8%	2.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	6	4	2	2	3	5	10	-3.7%	-6.2%	1.1%	0.6%	6.9%	7.3%
<b>Buildings</b>	<b>12</b>	<b>14</b>	<b>19</b>	<b>20</b>	<b>22</b>	<b>23</b>	<b>23</b>	<b>1.5%</b>	<b>2.7%</b>	<b>0.6%</b>	<b>0.8%</b>	<b>0.8%</b>	<b>0.1%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	3	3	2	1	1	0	0.4%	-0.1%	-2.8%	-4.5%	-4.7%	-8.1%
Gas	0	0	0	1	2	2	1	11.9%	-2.4%	18.3%	7.5%	1.1%	-7.3%
Electricity	2	3	4	5	6	7	9	4.8%	4.1%	1.1%	1.5%	2.2%	2.3%
Heat	0	0	0	1	2	2	3	n.s.	n.s.	n.s.	6.5%	2.7%	1.8%
Biomass & Other	8	9	12	11	11	11	11	0.8%	3.0%	-0.2%	-0.1%	0.2%	-0.6%
<b>Agriculture</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>-1.3%</b>	<b>-1.6%</b>	<b>2.5%</b>	<b>1.5%</b>	<b>1.5%</b>	<b>1.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	0	0	0	0	0	0	-1.6%	-4.4%	-0.7%	0.3%	-3.4%	-3.8%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	1	-1.4%	10.5%	6.3%	2.2%	2.7%	2.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	3.1%	-2.7%	6.0%	2.5%	7.3%	3.3%
<b>Transport</b>	<b>8</b>	<b>11</b>	<b>13</b>	<b>16</b>	<b>19</b>	<b>22</b>	<b>22</b>	<b>3.2%</b>	<b>1.7%</b>	<b>1.8%</b>	<b>1.8%</b>	<b>1.5%</b>	<b>-0.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	7	11	13	15	16	16	12	4.3%	2.2%	1.5%	0.3%	0.0%	-3.0%
Gas	0	0	0	0	1	2	1	n.s.	n.s.	n.s.	17.5%	3.7%	-1.9%
Electricity	0	0	0	0	1	2	4	-0.7%	10.0%	8.2%	35.0%	9.3%	5.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	1	0	1	1	2	4	-4.9%	-12.0%	8.6%	9.8%	6.3%	5.7%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>9</b>	<b>12</b>	<b>14</b>	<b>15</b>	<b>-0.5%</b>	<b>-0.5%</b>	<b>4.6%</b>	<b>3.1%</b>	<b>1.6%</b>	<b>0.4%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Rest South America	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	102	122	140	158	173	184	192	1.8%	1.4%	1.2%	0.9%	0.6%	0.4%
GDP per capita (ppp, k\$'05)	6	7	9	11	16	22	30	0.9%	2.6%	2.8%	3.3%	3.4%	3.2%
GDP per capita (mer, k\$'05)	3	3	4	5	7	10	14	0.8%	2.5%	2.8%	3.3%	3.4%	3.2%
Share Value Added - Agriculture (%)	10	6	7	5	5	4	4	-3.8%	1.3%	-3.1%	-1.2%	-0.9%	-0.6%
Share Value Added - Industry (%)	39	33	39	37	36	34	31	-1.7%	1.7%	-0.4%	-0.4%	-0.6%	-0.8%
Share Value Added - Services (%)	52	61	54	57	60	62	65	1.6%	-1.2%	0.7%	0.4%	0.4%	0.4%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	12	8	13	13	15	18	23	-4.2%	5.6%	-0.1%	1.4%	2.0%	2.3%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	17	26	20	23	39	35	32	4.7%	-2.5%	1.3%	5.4%	-1.2%	-0.7%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	888	933	1 148	1 101	336	- 276	- 738	0.5%	2.1%	-0.4%	-11.2%	n.s.	n.s.
Total GHG (excl. sinks)	907	1 004	1 208	1 101	798	519	183	1.0%	1.9%	-0.9%	-3.2%	-4.2%	-9.9%
Total GHG (energy, industry, agriculture)	431	523	687	768	766	492	155	2.0%	2.8%	1.1%	0.0%	-4.3%	-10.9%
CO <sub>2</sub>	222	284	404	490	545	314	- 33	2.5%	3.6%	1.9%	1.1%	-5.4%	n.s.
CH <sub>4</sub>	152	182	210	200	154	117	132	1.8%	1.4%	-0.5%	-2.6%	-2.7%	1.2%
N <sub>2</sub> O	53	55	70	73	64	57	52	0.4%	2.3%	0.5%	-1.4%	-1.0%	-1.0%
F gases	4	2	3	4	3	4	5	-8.2%	8.2%	2.1%	-2.2%	1.6%	3.0%
Total GHG from Energy and Industry	282	357	489	566	605	355	36	2.4%	3.2%	1.5%	0.7%	-5.2%	-20.5%
CO <sub>2</sub> Emissions from Fuel Comb.	204	257	374	452	495	274	- 52	2.3%	3.8%	1.9%	0.9%	-5.7%	n.s.
Power generation/District heating	32	32	65	53	50	- 22	- 104	0.0%	7.4%	-2.0%	-0.5%	n.s.	n.s.
Industry	49	63	93	121	150	78	- 6	2.7%	3.9%	2.6%	2.1%	-6.3%	n.s.
Buildings	17	20	22	25	22	12	4	1.8%	1.2%	1.1%	-1.1%	-5.8%	-10.8%
Agriculture	2	5	6	8	8	6	4	7.3%	2.9%	3.0%	-0.2%	-3.5%	-3.6%
Transport	65	80	119	178	201	163	85	2.1%	4.1%	4.2%	1.2%	-2.1%	-6.3%
Other	40	57	69	67	64	37	- 35	3.6%	1.9%	-0.3%	-0.5%	-5.4%	n.s.
CO <sub>2</sub> captured (CCS)	0	0	0	0	4	80	222	n.s.	n.s.	n.s.	n.s.	35.0%	10.7%
Coal	0	0	0	0	3	28	22	n.s.	n.s.	n.s.	n.s.	24.2%	-2.4%
Gas	0	0	0	0	1	7	10	n.s.	n.s.	n.s.	n.s.	24.4%	4.0%
Biomass	0	0	0	0	0	46	190	n.s.	n.s.	n.s.	n.s.	n.s.	15.3%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	219	304	346	420	446	417	1 252	3.3%	1.3%	2.0%	0.6%	-0.7%	11.6%
Coal	16	33	52	79	91	12	0	7.4%	4.8%	4.2%	1.4%	-18.0%	-36.4%
Oil	155	213	211	213	171	155	913	3.2%	-0.1%	0.1%	-2.2%	-1.0%	19.4%
Natural gas	25	31	50	66	84	71	44	2.3%	4.9%	2.8%	2.4%	-1.6%	-4.8%
Biomass	13	12	14	38	64	121	217	-1.4%	2.1%	10.3%	5.3%	6.6%	6.1%
Nuclear <sup>1</sup>	0	0	0	1	6	11	12	n.s.	n.s.	n.s.	14.7%	6.7%	1.1%
Hydro	10	16	18	21	24	27	30	4.6%	1.5%	1.6%	1.4%	1.1%	1.1%
Other renewables	0	0	0	1	7	20	35	n.s.	-10.4%	50.9%	19.7%	11.9%	5.9%
Net Imports	- 124	- 186	- 189	- 225	- 206	- 161	- 991						
Coal	- 12	- 29	- 48	- 66	- 69	- 1	6						
Oil	- 109	- 157	- 130	- 115	- 70	- 83	- 881						
Natural gas	- 1	4	- 8	- 23	- 40	- 34	- 26						
Biomass	0	0	0	- 16	- 22	- 35	- 73						
Biofuels	0	0	0	0	- 1	- 4	- 14						
Electricity	- 2	- 4	- 4	- 4	- 4	- 4	- 4						
Primary Energy Demand <sup>2</sup>	95	118	157	195	241	256	260	2.2%	2.9%	2.2%	2.1%	0.6%	0.2%
Coal	4	4	4	13	22	12	6	-1.3%	2.0%	11.3%	5.3%	-6.2%	-6.0%
Oil	46	56	82	98	101	71	32	2.0%	3.8%	1.9%	0.3%	-3.4%	-7.8%
Natural gas	24	35	43	43	44	37	18	3.9%	1.9%	0.0%	0.3%	-1.7%	-7.0%
Biomass	13	12	14	21	42	86	144	-1.4%	2.1%	4.2%	6.9%	7.4%	5.4%
Nuclear <sup>1</sup>	0	0	0	1	6	11	12	n.s.	n.s.	n.s.	14.7%	6.7%	1.1%
Hydro	10	16	18	21	24	27	30	4.6%	1.5%	1.6%	1.4%	1.1%	1.1%
Other renewables	0	0	0	1	7	20	35	n.s.	-10.4%	50.9%	19.7%	11.9%	5.9%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	95	118	157	195	241	256	260	2.2%	2.9%	2.2%	2.1%	0.6%	0.2%
Energy for Power Generation	22	27	43	45	64	91	131	2.3%	4.6%	0.5%	3.5%	3.7%	3.7%
Other Energy Transformation & Losses	13	18	17	20	25	38	43	3.4%	-0.7%	1.8%	2.5%	4.0%	1.4%
Final consumption	69	85	115	153	189	188	173	2.1%	3.1%	2.9%	2.1%	0.0%	-0.9%
Steel, Non-Met. Minerals and Chem.	10	14	19	22	34	26	13	3.0%	3.5%	1.5%	4.4%	-2.6%	-6.7%
Other Industry	13	16	25	35	41	45	53	1.7%	4.8%	3.3%	1.6%	1.1%	1.6%
Non-Energy Use	2	5	3	5	4	3	2	10.0%	-3.6%	3.4%	-0.5%	-2.5%	-3.4%
Residential	16	16	19	19	21	21	21	0.2%	1.5%	0.2%	0.6%	0.2%	0.1%
Services	3	4	6	8	12	14	18	3.5%	3.9%	3.2%	3.2%	2.2%	2.3%
Agriculture	2	2	3	4	5	5	6	2.4%	2.4%	2.3%	1.4%	1.2%	1.0%
Road	22	27	39	58	71	71	57	2.2%	3.7%	4.3%	1.9%	0.0%	-2.1%
Rail	0	0	0	0	0	0	0	-2.6%	1.3%	3.2%	1.6%	1.4%	1.3%
Aviation	0	0	0	0	0	0	0	-0.8%	1.1%	4.4%	3.0%	1.1%	-0.6%
Other Transport	1	0	0	1	1	1	1	-5.5%	2.7%	6.8%	2.5%	-0.6%	-0.9%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest South America	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>12</b>	<b>12</b>	<b>25</b>	<b>21</b>	<b>27</b>	<b>33</b>	<b>53</b>	<b>0.0%</b>	<b>7.7%</b>	<b>-1.5%</b>	<b>2.4%</b>	<b>2.0%</b>	<b>4.8%</b>
Coal	1	1	1	6	8	6	4	-4.2%	7.9%	15.6%	3.4%	-3.0%	-3.3%
Oil	3	4	9	3	1	0	0	1.9%	7.7%	-8.9%	-10.4%	-30.3%	n.s.
Gas	7	7	13	8	7	5	3	-0.6%	7.1%	-5.5%	-1.4%	-3.6%	-3.4%
Biomass & Waste	0	0	1	4	11	22	45	1.7%	18.4%	13.2%	9.7%	7.4%	7.3%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>154</b>	<b>226</b>	<b>308</b>	<b>363</b>	<b>496</b>	<b>709</b>	<b>1 023</b>	<b>3.9%</b>	<b>3.1%</b>	<b>1.7%</b>	<b>3.2%</b>	<b>3.6%</b>	<b>3.7%</b>
Coal	4	3	5	28	42	30	22	-3.7%	6.9%	19.1%	3.9%	-3.2%	-3.2%
of which CCS	0	0	0	0	3	24	21	n.s.	n.s.	n.s.	n.s.	22.8%	-1.3%
Oil	13	15	32	15	5	0	0	2.1%	7.7%	-7.4%	-10.4%	-30.3%	n.s.
Gas	21	26	54	39	37	27	20	1.9%	7.8%	-3.3%	-0.6%	-3.0%	-3.1%
of which CCS	0	0	0	0	0	7	10	n.s.	n.s.	n.s.	n.s.	35.2%	3.0%
Biomass & Waste	1	1	4	17	46	103	220	3.6%	19.1%	14.7%	10.6%	8.4%	7.9%
of which CCS	0	0	0	0	0	42	135	n.s.	n.s.	n.s.	n.s.	n.s.	12.4%
Nuclear	0	0	0	6	23	44	48	n.s.	n.s.	n.s.	14.9%	6.8%	0.7%
Hydro	116	182	212	248	284	317	354	4.6%	1.5%	1.6%	1.4%	1.1%	1.1%
Wind	0	0	0	7	39	106	183	n.s.	n.s.	48.2%	18.8%	10.4%	5.7%
Solar	0	0	0	3	20	81	170	n.s.	n.s.	n.s.	21.1%	14.8%	7.8%
Other	0	0	0	0	0	1	6	n.s.	n.s.	n.s.	27.9%	18.8%	17.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>43</b>	<b>55</b>	<b>65</b>	<b>95</b>	<b>133</b>	<b>228</b>	<b>356</b>	<b>2.5%</b>	<b>1.8%</b>	<b>3.8%</b>	<b>3.5%</b>	<b>5.5%</b>	<b>4.5%</b>
Coal	1	1	1	4	7	9	8	4.7%	-0.2%	17.1%	5.5%	2.9%	-1.4%
of which CCS	0	0	0	0	0	4	7	n.s.	n.s.	n.s.	n.s.	26.5%	4.6%
Oil	6	8	9	18	19	19	19	3.2%	0.3%	7.2%	0.9%	0.0%	-0.2%
Gas	8	10	15	20	15	17	14	1.8%	4.8%	2.6%	-2.6%	1.2%	-1.9%
of which CCS	0	0	0	0	0	2	3	n.s.	n.s.	n.s.	n.s.	42.3%	7.3%
Biomass & Waste	0	0	1	3	8	26	66	1.9%	14.0%	17.4%	10.6%	12.0%	9.8%
of which CCS	0	0	0	0	0	6	26	n.s.	n.s.	n.s.	n.s.	n.s.	16.0%
Nuclear	0	0	0	1	4	7	7	n.s.	n.s.	n.s.	14.7%	6.7%	0.5%
Hydro	28	36	40	44	51	57	63	2.4%	1.1%	1.1%	1.4%	1.1%	1.1%
Wind	0	0	0	3	16	43	74	n.s.	n.s.	47.5%	18.6%	10.2%	5.5%
Solar	0	0	0	2	13	50	104	n.s.	n.s.	n.s.	20.7%	14.5%	7.6%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	27.2%	18.2%	16.9%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>69</b>	<b>85</b>	<b>115</b>	<b>153</b>	<b>189</b>	<b>188</b>	<b>173</b>	<b>2.1%</b>	<b>3.1%</b>	<b>2.9%</b>	<b>2.1%</b>	<b>0.0%</b>	<b>-0.9%</b>
Coal	2	3	2	6	12	4	1	2.6%	-2.2%	9.6%	7.3%	-10.5%	-14.2%
Oil	35	46	60	86	90	65	30	2.6%	2.8%	3.7%	0.5%	-3.2%	-7.4%
Gas	9	13	23	23	28	25	9	3.2%	5.7%	0.2%	2.0%	-1.3%	-9.2%
Electricity	8	12	17	22	31	47	69	3.4%	4.0%	2.4%	3.6%	4.0%	4.0%
Heat	0	0	0	0	1	4	5	n.s.	-17.4%	39.3%	19.9%	11.0%	2.4%
Biomass & Other	13	11	13	16	25	44	58	-1.5%	1.2%	2.2%	4.8%	5.5%	3.0%
Share of Renewables <sup>3</sup> (%)	33%	32%	26%	25%	34%	62%	100%	-0.3%	-1.9%	-0.5%	3.0%	6.2%	4.9%
<b>Industry (incl. non-energy use)</b>	<b>25</b>	<b>34</b>	<b>48</b>	<b>62</b>	<b>80</b>	<b>75</b>	<b>69</b>	<b>3.1%</b>	<b>3.4%</b>	<b>2.6%</b>	<b>3.0%</b>	<b>-0.6%</b>	<b>-0.9%</b>
Coal	2	3	2	6	12	4	1	3.0%	-2.2%	9.7%	7.4%	-10.5%	-14.2%
Oil	8	12	16	22	20	11	4	4.7%	2.5%	3.3%	-0.7%	-5.8%	-10.8%
Gas	9	11	18	18	22	19	5	2.3%	5.4%	-0.4%	1.9%	-1.4%	-12.3%
Electricity	4	5	7	9	14	19	25	2.2%	3.9%	3.0%	3.8%	3.4%	2.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	3	3	4	7	12	22	34	1.7%	2.3%	4.9%	5.6%	6.3%	4.3%
<b>Buildings</b>	<b>19</b>	<b>20</b>	<b>25</b>	<b>28</b>	<b>32</b>	<b>35</b>	<b>39</b>	<b>0.8%</b>	<b>2.1%</b>	<b>1.0%</b>	<b>1.4%</b>	<b>1.0%</b>	<b>1.1%</b>
Coal	0	0	0	0	0	0	0	-5.9%	-3.0%	2.0%	-6.3%	-16.0%	n.s.
Oil	5	5	5	5	3	2	1	0.5%	0.3%	-0.3%	-3.0%	-7.1%	-11.3%
Gas	1	2	3	4	5	3	1	9.7%	3.8%	3.9%	1.5%	-4.5%	-10.5%
Electricity	4	7	10	12	15	18	24	4.2%	4.1%	1.9%	2.1%	2.2%	2.8%
Heat	0	0	0	0	1	4	5	n.s.	-17.4%	39.3%	19.9%	11.0%	2.4%
Biomass & Other	9	7	7	7	8	8	9	-2.5%	0.6%	-1.0%	1.4%	0.9%	0.5%
<b>Agriculture</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>6</b>	<b>2.4%</b>	<b>2.4%</b>	<b>2.3%</b>	<b>1.4%</b>	<b>1.2%</b>	<b>1.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-2.8%	n.s.	n.s.
Oil	1	1	2	3	3	2	1	7.2%	2.9%	3.0%	-0.2%	-3.5%	-3.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	-5.6%	0.1%	-2.1%	-2.2%
Electricity	0	0	0	1	1	1	2	7.7%	5.2%	3.5%	3.8%	4.5%	3.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	1	1	1	1	2	3	-3.4%	0.2%	0.0%	4.1%	5.8%	2.6%
<b>Transport</b>	<b>22</b>	<b>27</b>	<b>39</b>	<b>60</b>	<b>73</b>	<b>73</b>	<b>59</b>	<b>2.0%</b>	<b>3.7%</b>	<b>4.3%</b>	<b>2.0%</b>	<b>0.0%</b>	<b>-2.1%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	22	27	38	57	64	51	25	1.9%	3.4%	4.3%	1.1%	-2.3%	-6.8%
Gas	0	0	1	1	2	3	3	29.8%	22.3%	-1.7%	5.2%	5.5%	1.1%
Electricity	0	0	0	0	2	8	18	0.7%	1.3%	7.1%	44.4%	13.5%	8.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	4	11	13	-22.0%	n.s.	20.5%	12.8%	9.4%	1.9%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>13</b>	<b>18</b>	<b>17</b>	<b>20</b>	<b>25</b>	<b>38</b>	<b>43</b>	<b>3.4%</b>	<b>-0.7%</b>	<b>1.8%</b>	<b>2.5%</b>	<b>4.0%</b>	<b>1.4%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

GECO2016 2°C	SUMMARY GHG & ENERGY BALANCE
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Egypt	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	56	68	82	101	117	134	151	1.9%	1.8%	2.1%	1.5%	1.4%	1.2%
GDP per capita (ppp, k\$'05)	3	4	5	6	9	13	17	2.3%	2.9%	1.3%	3.7%	3.6%	2.7%
GDP per capita (mer, k\$'05)	1	1	1	2	2	3	4	2.3%	2.9%	1.3%	3.7%	3.6%	2.7%
Share Value Added - Agriculture (%)	19	17	14	13	10	9	8	-1.4%	-1.8%	-0.8%	-2.4%	-1.6%	-0.9%
Share Value Added - Industry (%)	29	33	38	39	40	37	34	1.5%	1.3%	0.5%	0.0%	-0.6%	-0.9%
Share Value Added - Services (%)	52	50	48	48	50	54	58	-0.4%	-0.3%	-0.2%	0.6%	0.7%	0.7%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	18	23	-6.5%	7.4%	-4.3%	1.5%	2.3%	2.9%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	18	21	30	38	49	38	33	1.4%	3.8%	2.3%	2.5%	-2.4%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	144	175	279	335	391	357	248	2.0%	4.8%	1.8%	1.6%	-0.9%	-3.6%
Total GHG (excl. sinks)	144	175	280	335	391	357	249	2.0%	4.8%	1.8%	1.6%	-0.9%	-3.6%
Total GHG (energy, industry, agriculture)	144	175	280	335	391	357	249	2.0%	4.8%	1.8%	1.6%	-0.9%	-3.6%
CO <sub>2</sub>	98	119	203	256	319	295	204	2.0%	5.5%	2.3%	2.2%	-0.8%	-3.6%
CH <sub>4</sub>	25	36	48	45	43	36	24	3.7%	3.0%	-0.6%	-0.4%	-1.9%	-4.0%
N <sub>2</sub> O	19	18	24	30	27	24	18	-0.8%	3.2%	2.4%	-1.3%	-0.9%	-2.7%
F gases	2	3	4	3	2	2	2	3.5%	2.8%	-1.1%	-3.6%	-0.9%	0.4%
Total GHG from Energy and Industry	125	150	251	298	352	321	221	1.8%	5.3%	1.7%	1.7%	-0.9%	-3.7%
CO <sub>2</sub> Emissions from Fuel Comb.	86	102	177	223	272	240	167	1.7%	5.7%	2.3%	2.0%	-1.2%	-3.6%
Power generation/District heating	22	27	62	82	92	60	40	2.0%	8.7%	2.9%	1.1%	-4.2%	-3.9%
Industry	28	26	38	41	54	59	44	-0.5%	3.6%	0.8%	2.8%	1.0%	-2.8%
Buildings	10	12	17	17	23	18	7	1.8%	3.8%	-0.2%	2.9%	-2.4%	-8.7%
Agriculture	0	0	7	8	8	6	4	n.s.	40.8%	1.1%	0.9%	-2.9%	-3.5%
Transport	16	29	38	59	75	77	52	6.1%	2.8%	4.6%	2.4%	0.3%	-3.8%
Other	11	8	16	16	20	20	18	-2.5%	6.8%	0.3%	1.9%	0.3%	-1.0%
CO <sub>2</sub> captured (CCS)	0	0	0	0	1	49	99	n.s.	n.s.	n.s.	n.s.	51.2%	7.3%
Coal	0	0	0	0	0	14	29	n.s.	n.s.	n.s.	n.s.	44.9%	7.2%
Gas	0	0	0	0	0	34	69	n.s.	n.s.	n.s.	n.s.	56.0%	7.3%
Biomass	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	20.3%	17.7%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	53	58	89	97	118	132	127	0.9%	4.4%	0.8%	2.0%	1.1%	-0.4%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	44	38	36	26	20	16	15	-1.4%	-0.7%	-3.2%	-2.3%	-2.3%	-0.7%
Natural gas	7	17	51	67	90	98	87	9.9%	11.4%	2.8%	3.0%	0.9%	-1.2%
Biomass	2	1	2	1	2	2	2	-1.7%	1.7%	-1.8%	1.8%	1.5%	0.9%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	12.0%	26.2%
Hydro	1	1	1	1	1	1	2	3.3%	-0.5%	0.5%	1.0%	0.7%	0.7%
Other renewables	0	0	0	2	5	14	21	14.1%	16.0%	27.4%	11.5%	11.6%	4.3%
Net Imports	-21	-17	-17	-6	-2	3	7						
Coal	1	1	1	2	5	9	10						
Oil	-21	-16	-2	16	27	29	19						
Natural gas	0	-3	-15	-24	-35	-35	-23						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	33	41	73	91	116	135	134	2.2%	5.9%	2.2%	2.5%	1.5%	-0.1%
Coal	1	1	1	2	5	9	10	2.8%	-6.7%	14.2%	10.6%	5.1%	1.5%
Oil	23	23	34	42	47	46	34	0.0%	4.0%	2.1%	1.3%	-0.4%	-2.9%
Natural gas	7	14	36	43	56	63	64	7.9%	9.5%	1.9%	2.6%	1.2%	0.1%
Biomass	2	1	2	1	2	2	2	-1.9%	1.7%	-1.7%	1.8%	2.2%	2.1%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	12.0%	26.2%
Hydro	1	1	1	1	1	1	2	3.3%	-0.5%	0.5%	1.0%	0.7%	0.7%
Other renewables	0	0	0	2	5	14	21	14.1%	16.0%	27.4%	11.5%	11.6%	4.3%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	33	41	73	91	116	135	134	2.2%	5.9%	2.2%	2.5%	1.5%	-0.1%
Energy for Power Generation	9	12	26	35	42	56	73	3.1%	8.0%	3.2%	1.7%	2.8%	2.7%
Other Energy Transformation & Losses	4	3	5	3	5	7	8	-1.1%	4.6%	-5.3%	5.1%	3.3%	2.4%
Final consumption	24	31	52	67	88	103	95	2.8%	5.3%	2.5%	2.8%	1.6%	-0.8%
Steel, Non-Met. Minerals and Chem.	1	1	0	1	1	2	1	1.0%	-6.0%	4.0%	7.4%	4.3%	-4.3%
Other Industry	10	9	14	16	21	24	21	-0.3%	4.1%	1.3%	2.5%	1.5%	-1.0%
Non-Energy Use	2	3	7	8	11	14	13	4.0%	8.1%	1.0%	3.9%	2.2%	-1.0%
Residential	5	7	12	13	17	18	17	2.9%	4.9%	1.3%	2.2%	1.0%	-0.7%
Services	0	1	2	3	4	6	8	11.3%	6.9%	2.6%	3.5%	4.1%	3.0%
Agriculture	0	0	3	4	4	5	6	9.9%	24.6%	3.1%	2.0%	2.0%	1.8%
Road	5	8	13	22	28	31	26	4.9%	5.2%	4.9%	2.7%	1.0%	-1.8%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	4.1%	3.9%	3.1%
Aviation	0	0	1	1	1	1	1	8.0%	2.5%	4.3%	3.6%	1.8%	-0.9%
Other Transport	0	1	1	0	0	1	0	n.s.	-3.5%	-4.4%	3.8%	1.1%	-1.1%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%



<b>Egypt</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>8</b>	<b>11</b>	<b>25</b>	<b>33</b>	<b>36</b>	<b>40</b>	<b>50</b>	<b>3.1%</b>	<b>8.6%</b>	<b>2.8%</b>	<b>1.0%</b>	<b>1.1%</b>	<b>2.2%</b>
Coal	0	0	0	1	3	6	8	n.s.	n.s.	n.s.	12.4%	6.8%	3.4%
Oil	4	2	5	5	4	3	3	-6.9%	10.1%	0.2%	-2.0%	-2.9%	0.1%
Gas	4	9	20	26	29	31	38	8.3%	8.3%	3.1%	0.8%	0.8%	2.1%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	13.9%	2.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>42</b>	<b>78</b>	<b>147</b>	<b>205</b>	<b>261</b>	<b>372</b>	<b>502</b>	<b>6.3%</b>	<b>6.5%</b>	<b>3.4%</b>	<b>2.5%</b>	<b>3.6%</b>	<b>3.1%</b>
Coal	0	0	0	5	15	29	40	n.s.	n.s.	n.s.	12.7%	6.5%	3.4%
of which CCS	0	0	0	0	0	17	35	n.s.	n.s.	n.s.	n.s.	48.0%	7.6%
Oil	13	22	20	23	18	14	14	5.2%	-1.2%	1.3%	-2.0%	-2.9%	0.2%
Gas	19	42	112	147	162	183	229	8.3%	10.3%	2.7%	1.0%	1.2%	2.3%
of which CCS	0	0	0	0	1	90	179	n.s.	n.s.	n.s.	n.s.	57.7%	7.2%
Biomass & Waste	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	14.2%	3.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	10.1%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	10	14	13	14	15	16	18	3.3%	-0.5%	0.5%	1.0%	0.7%	0.7%
Wind	0	0	1	16	44	91	119	n.s.	23.7%	30.2%	10.6%	7.4%	2.7%
Solar	0	0	0	0	5	38	81	n.s.	n.s.	4.2%	28.3%	22.8%	7.8%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	24.3%	21.9%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>12</b>	<b>19</b>	<b>27</b>	<b>49</b>	<b>69</b>	<b>114</b>	<b>153</b>	<b>5.1%</b>	<b>3.3%</b>	<b>6.3%</b>	<b>3.4%</b>	<b>5.2%</b>	<b>3.0%</b>
Coal	0	0	0	1	2	4	6	n.s.	n.s.	n.s.	13.1%	6.9%	3.5%
of which CCS	0	0	0	0	0	2	5	n.s.	n.s.	n.s.	n.s.	48.1%	7.9%
Oil	4	6	5	5	6	4	4	3.5%	-2.5%	0.4%	0.9%	-3.0%	0.2%
Gas	5	10	18	33	35	40	42	8.3%	6.2%	6.1%	0.7%	1.4%	0.3%
of which CCS	0	0	0	0	0	12	26	n.s.	n.s.	n.s.	n.s.	n.s.	7.9%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	14.2%	3.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	9.9%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	3	3	3	3	3	4	4	0.3%	0.2%	0.8%	1.0%	0.7%	0.7%
Wind	0	0	1	7	19	40	51	n.s.	40.0%	29.2%	10.6%	7.4%	2.5%
Solar	0	0	0	0	3	22	46	n.s.	n.s.	21.1%	28.7%	22.8%	7.7%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	23.7%	21.3%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>24</b>	<b>31</b>	<b>52</b>	<b>67</b>	<b>88</b>	<b>103</b>	<b>95</b>	<b>2.8%</b>	<b>5.3%</b>	<b>2.5%</b>	<b>2.8%</b>	<b>1.6%</b>	<b>-0.8%</b>
Coal	1	1	0	1	2	3	2	1.0%	-6.0%	8.2%	9.2%	2.1%	-3.7%
Oil	16	20	29	36	43	42	31	2.2%	3.9%	2.3%	1.7%	-0.1%	-3.1%
Gas	2	4	11	14	23	26	18	5.0%	10.7%	2.3%	5.1%	1.4%	-3.6%
Electricity	3	6	11	14	18	26	36	5.9%	6.8%	3.0%	2.5%	3.7%	3.1%
Heat	0	0	0	0	0	3	4	n.s.	n.s.	n.s.	11.5%	20.7%	3.5%
Biomass & Other	2	1	2	1	2	2	4	-1.9%	1.7%	-1.5%	2.3%	4.2%	5.7%
Share of Renewables <sup>3</sup> (%)	11%	8%	6%	6%	10%	21%	34%	-2.6%	-3.7%	0.9%	4.2%	7.9%	5.1%
<b>Industry (incl. non-energy use)</b>	<b>12</b>	<b>13</b>	<b>21</b>	<b>24</b>	<b>33</b>	<b>40</b>	<b>35</b>	<b>0.6%</b>	<b>4.9%</b>	<b>1.3%</b>	<b>3.1%</b>	<b>1.8%</b>	<b>-1.2%</b>
Coal	1	1	0	1	2	3	2	1.0%	-6.0%	8.2%	9.2%	2.1%	-3.7%
Oil	7	7	8	8	10	11	11	-0.9%	1.3%	0.5%	2.0%	1.1%	-0.3%
Gas	2	4	10	11	15	19	14	4.4%	10.4%	1.1%	3.5%	2.0%	-2.7%
Electricity	1	2	4	4	5	7	9	3.8%	5.2%	2.3%	2.2%	2.7%	1.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	0	0	0	0	0	0	n.s.	n.s.	n.s.	18.6%	-2.2%	-1.1%
<b>Buildings</b>	<b>6</b>	<b>8</b>	<b>14</b>	<b>16</b>	<b>21</b>	<b>25</b>	<b>25</b>	<b>3.7%</b>	<b>5.2%</b>	<b>1.5%</b>	<b>2.5%</b>	<b>1.7%</b>	<b>0.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	4	5	4	3	2	1	1.3%	3.2%	-3.0%	-2.4%	-4.4%	-8.2%
Gas	0	0	1	2	6	5	2	16.9%	9.7%	10.9%	9.4%	-1.2%	-8.9%
Electricity	2	3	7	9	11	14	18	7.5%	7.7%	2.8%	1.8%	3.0%	2.7%
Heat	0	0	0	0	0	3	4	n.s.	n.s.	n.s.	11.5%	20.7%	3.5%
Biomass & Other	1	1	2	1	1	1	0	2.1%	1.7%	-2.2%	-2.0%	-4.1%	-9.4%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>9.9%</b>	<b>24.6%</b>	<b>3.1%</b>	<b>2.0%</b>	<b>2.0%</b>	<b>1.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	2	2	3	2	1	n.s.	40.8%	1.1%	0.9%	-2.9%	-3.5%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	1	2	3	4	6.9%	6.9%	10.0%	3.5%	5.2%	3.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	20.4%	4.9%
<b>Transport</b>	<b>5</b>	<b>9</b>	<b>14</b>	<b>23</b>	<b>30</b>	<b>33</b>	<b>28</b>	<b>5.9%</b>	<b>4.6%</b>	<b>4.7%</b>	<b>2.8%</b>	<b>1.0%</b>	<b>-1.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	5	9	14	22	28	28	18	5.9%	4.3%	4.6%	2.2%	0.0%	-4.0%
Gas	0	0	0	1	1	2	2	n.s.	n.s.	4.1%	10.8%	4.4%	-1.2%
Electricity	0	0	0	0	1	3	5	n.s.	n.s.	n.s.	30.7%	12.4%	6.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	23.5%	13.1%	11.7%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>4</b>	<b>3</b>	<b>5</b>	<b>3</b>	<b>5</b>	<b>7</b>	<b>8</b>	<b>-1.1%</b>	<b>4.6%</b>	<b>-5.3%</b>	<b>5.1%</b>	<b>3.3%</b>	<b>2.4%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Algeria & Libya	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	30	37	42	50	56	60	65	1.9%	1.5%	1.6%	1.1%	0.8%	0.7%
GDP per capita (ppp, k\$'05)	5	7	6	8	12	16	20	2.9%	-0.7%	2.6%	3.8%	3.1%	2.3%
GDP per capita (mer, k\$'05)	2	3	4	4	6	9	11	3.7%	2.6%	0.8%	3.8%	3.1%	2.3%
Share Value Added - Agriculture (%)	8	5	9	8	7	6	6	-3.4%	4.6%	-0.8%	-1.9%	-1.1%	-0.6%
Share Value Added - Industry (%)	33	36	51	48	46	42	38	1.0%	3.6%	-0.6%	-0.5%	-0.9%	-1.0%
Share Value Added - Services (%)	59	58	40	44	47	52	57	-0.2%	-3.7%	0.9%	0.8%	0.9%	0.8%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	18	23	-6.5%	7.4%	-4.3%	1.5%	2.3%	2.9%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	18	21	30	38	49	38	33	1.4%	3.8%	2.3%	2.5%	-2.4%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	170	204	264	331	362	244	182	1.9%	2.6%	2.3%	0.9%	-3.9%	-2.9%
Total GHG (excl. sinks)	170	205	265	331	364	247	184	1.9%	2.6%	2.3%	0.9%	-3.8%	-2.9%
Total GHG (energy, industry, agriculture)	168	203	262	329	362	244	182	1.9%	2.6%	2.3%	1.0%	-3.8%	-2.9%
CO <sub>2</sub>	114	140	190	271	312	203	112	2.1%	3.1%	3.6%	1.4%	-4.2%	-5.8%
CH <sub>4</sub>	48	57	64	47	41	34	64	1.7%	1.2%	-3.0%	-1.5%	-1.9%	6.7%
N <sub>2</sub> O	6	5	7	10	8	7	5	-0.4%	2.9%	3.2%	-1.5%	-1.7%	-3.0%
F gases	1	1	1	1	1	1	1	4.0%	3.0%	-2.0%	-5.6%	0.3%	0.8%
Total GHG from Energy and Industry	160	195	253	315	348	232	172	2.0%	2.7%	2.2%	1.0%	-4.0%	-2.9%
CO <sub>2</sub> Emissions from Fuel Comb.	81	109	156	228	266	168	95	3.0%	3.7%	3.9%	1.6%	-4.5%	-5.6%
Power generation/District heating	18	32	47	59	84	43	28	5.8%	4.1%	2.3%	3.5%	-6.5%	-4.1%
Industry	11	15	20	22	19	12	8	2.7%	2.8%	1.2%	-1.5%	-4.3%	-4.4%
Buildings	9	13	19	31	28	14	5	3.7%	3.7%	4.9%	-1.0%	-6.5%	-9.3%
Agriculture	0	0	0	0	0	0	0	0.9%	17.6%	1.3%	0.1%	-2.9%	-3.1%
Transport	18	23	45	83	98	70	32	2.7%	7.1%	6.2%	1.7%	-3.3%	-7.4%
Other	25	26	24	32	37	28	21	0.5%	-0.7%	3.0%	1.4%	-2.7%	-3.0%
CO <sub>2</sub> captured (CCS)	0	0	0	0	7	58	86	n.s.	n.s.	n.s.	n.s.	23.3%	4.1%
Coal	0	0	0	0	0	3	6	n.s.	n.s.	n.s.	n.s.	27.9%	7.3%
Gas	0	0	0	0	7	55	77	n.s.	n.s.	n.s.	n.s.	23.1%	3.5%
Biomass	0	0	0	0	0	0	3	n.s.	n.s.	n.s.	n.s.	24.3%	23.5%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	183	224	246	229	278	305	189	2.0%	0.9%	-0.7%	2.0%	0.9%	-4.7%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	137	149	165	140	150	175	78	0.9%	1.0%	-1.6%	0.7%	1.6%	-7.8%
Natural gas	46	74	81	88	127	124	102	4.9%	0.8%	0.9%	3.7%	-0.2%	-2.0%
Biomass	0	0	0	1	1	2	1	3.6%	1.1%	10.7%	7.5%	4.0%	-2.8%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	26.2%	10.4%	3.9%
Hydro	0	0	0	0	0	0	0	-8.8%	12.4%	9.9%	1.4%	1.7%	1.3%
Other renewables	0	0	0	0	1	4	8	n.s.	n.s.	13.4%	25.6%	24.3%	6.6%
Net Imports	-150	-180	-184	-140	-170	-208	-102						
Coal	1	1	1	1	1	1	2						
Oil	-121	-127	-133	-94	-98	-138	-57						
Natural gas	-30	-53	-51	-46	-73	-73	-49						
Biomass	0	0	0	0	0	1	2						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	33	44	62	89	108	97	87	2.9%	3.4%	3.7%	2.0%	-1.1%	-1.1%
Coal	1	1	1	1	1	1	2	0.7%	-3.1%	0.7%	6.0%	3.9%	2.9%
Oil	16	22	32	45	52	37	20	3.2%	3.7%	3.6%	1.4%	-3.3%	-5.8%
Natural gas	16	21	29	42	54	52	52	2.6%	3.3%	3.8%	2.4%	-0.4%	0.1%
Biomass	0	0	0	0	1	2	3	3.6%	1.1%	8.7%	9.4%	6.7%	3.3%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	26.2%	10.4%	3.9%
Hydro	0	0	0	0	0	0	0	-8.8%	12.4%	9.9%	1.4%	1.7%	1.3%
Other renewables	0	0	0	0	1	4	8	n.s.	n.s.	13.4%	25.6%	24.3%	6.6%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	33	44	62	89	108	97	87	2.9%	3.4%	3.7%	2.0%	-1.1%	-1.1%
Energy for Power Generation	7	12	19	24	36	42	49	5.8%	4.5%	2.6%	4.2%	1.6%	1.5%
Other Energy Transformation & Losses	10	11	9	11	15	15	18	0.4%	-1.3%	2.0%	2.8%	0.3%	1.3%
Final consumption	18	24	39	60	69	58	46	3.0%	5.0%	4.5%	1.3%	-1.7%	-2.3%
Steel, Non-Met. Minerals and Chem.	2	2	3	4	3	1	1	1.2%	5.6%	3.0%	-4.1%	-6.0%	-5.0%
Other Industry	2	3	3	4	5	4	4	3.0%	2.3%	2.7%	1.5%	-1.8%	-1.1%
Non-Energy Use	3	5	5	5	6	6	5	3.5%	1.4%	0.2%	1.7%	-0.7%	-1.2%
Residential	4	6	8	13	13	9	7	4.6%	3.1%	5.2%	-0.4%	-3.1%	-2.4%
Services	0	1	3	4	5	6	6	4.3%	18.4%	2.2%	3.3%	0.5%	1.0%
Agriculture	0	0	0	0	0	0	0	0.9%	10.0%	-2.8%	2.4%	2.1%	1.8%
Road	7	8	16	29	36	30	22	2.2%	6.5%	6.3%	2.2%	-1.6%	-3.4%
Rail	0	0	0	0	0	0	0	1.4%	9.3%	2.4%	0.5%	0.0%	-0.3%
Aviation	0	0	0	0	0	0	0	7.2%	26.3%	-1.4%	1.5%	-1.0%	-1.9%
Other Transport	0	0	0	0	0	0	0	0.9%	9.8%	4.6%	1.9%	-1.7%	-2.0%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Algeria & Libya	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>7</b>	<b>12</b>	<b>19</b>	<b>24</b>	<b>36</b>	<b>38</b>	<b>41</b>	<b>5.8%</b>	<b>4.5%</b>	<b>2.6%</b>	<b>4.1%</b>	<b>0.6%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	19.4%	10.0%	4.5%
Oil	3	5	5	4	6	5	4	5.1%	0.5%	-1.8%	4.8%	-2.5%	-2.9%
Gas	4	7	14	20	29	32	35	6.3%	6.5%	3.8%	3.8%	1.0%	1.0%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	34.5%	6.1%	3.4%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>27</b>	<b>43</b>	<b>81</b>	<b>118</b>	<b>187</b>	<b>243</b>	<b>307</b>	<b>4.6%</b>	<b>6.5%</b>	<b>3.9%</b>	<b>4.7%</b>	<b>2.7%</b>	<b>2.4%</b>
Coal	0	0	0	0	2	5	8	n.s.	n.s.	n.s.	19.6%	9.6%	4.6%
of which CCS	0	0	0	0	0	4	7	n.s.	n.s.	n.s.	n.s.	29.0%	7.8%
Oil	11	13	18	17	28	21	16	1.5%	3.6%	-0.7%	4.8%	-2.5%	-2.7%
Gas	16	30	62	100	152	184	212	6.4%	7.6%	4.8%	4.3%	2.0%	1.4%
of which CCS	0	0	0	0	14	132	182	n.s.	n.s.	n.s.	n.s.	25.3%	3.3%
Biomass & Waste	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	35.9%	6.2%	3.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	14.1%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	25.4%	10.4%	-0.5%
Hydro	0	0	0	0	1	1	1	-8.8%	12.4%	9.9%	1.4%	1.7%	1.3%
Wind	0	0	0	0	2	11	29	n.s.	n.s.	n.s.	38.2%	16.8%	10.0%
Solar	0	0	0	1	2	19	39	n.s.	n.s.	11.5%	15.7%	24.3%	7.3%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	29.0%	25.4%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>8</b>	<b>11</b>	<b>20</b>	<b>25</b>	<b>33</b>	<b>50</b>	<b>78</b>	<b>2.7%</b>	<b>6.3%</b>	<b>2.4%</b>	<b>2.9%</b>	<b>4.2%</b>	<b>4.5%</b>
Coal	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	19.9%	9.2%	4.9%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	28.7%	8.0%
Oil	4	4	4	4	5	6	6	-0.5%	-0.1%	1.2%	1.9%	0.4%	0.7%
Gas	4	6	15	20	25	27	34	5.8%	9.1%	2.6%	2.3%	0.7%	2.4%
of which CCS	0	0	0	0	2	17	25	n.s.	n.s.	n.s.	n.s.	25.3%	4.1%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	36.2%	6.0%	3.8%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	14.2%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	25.1%	10.2%	-0.7%
Hydro	0	0	0	0	0	0	0	-0.4%	0.0%	-1.3%	1.5%	1.7%	1.3%
Wind	0	0	0	0	1	5	12	n.s.	n.s.	n.s.	37.9%	16.6%	9.9%
Solar	0	0	0	0	1	12	24	n.s.	n.s.	11.5%	15.9%	24.6%	7.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	28.4%	24.9%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>18</b>	<b>24</b>	<b>39</b>	<b>60</b>	<b>69</b>	<b>58</b>	<b>46</b>	<b>3.0%</b>	<b>5.0%</b>	<b>4.5%</b>	<b>1.3%</b>	<b>-1.7%</b>	<b>-2.3%</b>
Coal	0	0	0	0	0	0	0	-3.2%	-0.9%	1.6%	2.5%	-4.3%	-3.4%
Oil	11	14	23	37	41	29	16	2.3%	4.9%	5.0%	1.0%	-3.3%	-6.1%
Gas	4	7	10	15	15	10	5	4.6%	4.2%	3.8%	0.0%	-4.4%	-6.9%
Electricity	2	2	5	7	11	14	18	4.7%	7.8%	2.7%	4.7%	2.9%	2.5%
Heat	0	0	0	0	0	2	3	n.s.	n.s.	n.s.	n.s.	32.3%	3.3%
Biomass & Other	0	0	0	1	1	2	4	3.6%	1.1%	14.4%	4.1%	6.3%	7.0%
Share of Renewables <sup>3</sup> (%)	1%	1%	1%	1%	2%	12%	32%	0.0%	-3.0%	2.1%	8.6%	20.6%	9.7%
<b>Industry (incl. non-energy use)</b>	<b>7</b>	<b>9</b>	<b>12</b>	<b>14</b>	<b>14</b>	<b>12</b>	<b>10</b>	<b>2.9%</b>	<b>2.6%</b>	<b>1.8%</b>	<b>0.2%</b>	<b>-1.9%</b>	<b>-1.6%</b>
Coal	0	0	0	0	0	0	0	-3.2%	-0.9%	1.6%	2.5%	-4.3%	-3.4%
Oil	2	3	4	5	5	5	5	2.5%	2.8%	0.9%	0.9%	-0.5%	-0.4%
Gas	3	5	6	7	6	4	2	3.7%	2.4%	1.2%	-1.8%	-4.3%	-5.6%
Electricity	1	1	1	2	3	3	3	2.7%	4.0%	6.0%	3.5%	-0.3%	0.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-0.8%	0.8%	-5.1%
<b>Buildings</b>	<b>4</b>	<b>6</b>	<b>11</b>	<b>17</b>	<b>18</b>	<b>15</b>	<b>13</b>	<b>4.6%</b>	<b>5.6%</b>	<b>4.4%</b>	<b>0.6%</b>	<b>-1.9%</b>	<b>-1.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	3	3	4	3	2	1	2.3%	1.0%	2.8%	-2.2%	-6.7%	-8.8%
Gas	1	2	4	8	8	4	1	6.9%	7.5%	6.6%	-0.2%	-6.4%	-9.6%
Electricity	1	1	4	4	6	7	9	6.6%	9.5%	1.7%	3.8%	1.3%	2.0%
Heat	0	0	0	0	0	2	3	n.s.	n.s.	n.s.	n.s.	32.3%	3.3%
Biomass & Other	0	0	0	1	1	0	0	3.6%	1.1%	13.5%	-1.6%	-7.2%	-9.7%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.9%</b>	<b>10.0%</b>	<b>-2.8%</b>	<b>2.4%</b>	<b>2.1%</b>	<b>1.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	0.9%	11.8%	0.0%	-0.1%	-3.5%	-3.8%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	2.9%	0.3%	-2.2%	-2.5%
Electricity	0	0	0	0	0	0	0	1.0%	8.8%	-3.9%	2.8%	2.6%	2.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	14.1%	4.4%
<b>Transport</b>	<b>7</b>	<b>8</b>	<b>16</b>	<b>29</b>	<b>36</b>	<b>31</b>	<b>22</b>	<b>2.2%</b>	<b>6.6%</b>	<b>6.2%</b>	<b>2.2%</b>	<b>-1.6%</b>	<b>-3.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	7	8	16	29	33	23	10	2.2%	6.6%	6.2%	1.3%	-3.5%	-7.6%
Gas	0	0	0	0	1	2	1	n.s.	n.s.	n.s.	28.3%	2.2%	-4.6%
Electricity	0	0	0	0	1	4	6	3.0%	6.5%	6.1%	29.9%	13.6%	4.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	2	4	n.s.	n.s.	n.s.	38.1%	13.5%	8.5%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>10</b>	<b>11</b>	<b>9</b>	<b>11</b>	<b>15</b>	<b>15</b>	<b>18</b>	<b>0.4%</b>	<b>-1.3%</b>	<b>2.0%</b>	<b>2.8%</b>	<b>0.3%</b>	<b>1.3%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Morocco & Tunisia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	33	39	43	49	53	56	58	1.6%	1.1%	1.2%	0.8%	0.5%	0.3%
GDP per capita (ppp, k\$'05)	3	4	5	7	11	16	23	1.7%	3.7%	3.2%	4.2%	4.1%	3.4%
GDP per capita (mer, k\$'05)	2	2	3	4	5	8	11	1.9%	3.7%	3.1%	4.2%	4.1%	3.4%
Share Value Added - Agriculture (%)	18	14	13	10	8	7	6	-2.8%	-0.5%	-2.4%	-2.3%	-1.5%	-0.9%
Share Value Added - Industry (%)	33	30	30	30	30	26	23	-1.2%	0.2%	0.1%	-0.3%	-1.1%	-1.6%
Share Value Added - Services (%)	48	57	57	59	62	67	71	1.6%	0.0%	0.4%	0.5%	0.7%	0.7%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	18	23	-6.5%	7.4%	-4.3%	1.5%	2.3%	2.9%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	18	21	30	38	49	38	33	1.4%	3.8%	2.3%	2.5%	-2.4%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	51	69	103	139	148	134	79	3.1%	4.1%	3.0%	0.7%	-1.0%	-5.2%
Total GHG (excl. sinks)	60	79	103	139	151	138	83	2.9%	2.7%	3.0%	0.8%	-0.9%	-5.0%
Total GHG (energy, industry, agriculture)	59	78	103	139	151	138	83	2.9%	2.8%	3.0%	0.8%	-0.9%	-5.0%
CO <sub>2</sub>	37	54	76	111	123	113	66	3.8%	3.5%	3.8%	1.0%	-0.8%	-5.2%
CH <sub>4</sub>	13	16	18	19	19	18	11	2.1%	1.3%	0.4%	0.1%	-0.9%	-4.4%
N <sub>2</sub> O	8	8	8	9	9	8	6	-0.2%	0.6%	0.9%	0.0%	-1.8%	-2.8%
F gases	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Total GHG from Energy and Industry	46	65	89	124	135	124	72	3.5%	3.3%	3.4%	0.9%	-0.8%	-5.4%
CO <sub>2</sub> Emissions from Fuel Comb.	32	47	67	98	106	96	57	3.9%	3.5%	3.9%	0.8%	-1.0%	-5.1%
Power generation/District heating	12	17	24	37	38	27	14	3.9%	3.6%	4.5%	0.0%	-3.4%	-5.9%
Industry	9	9	11	18	19	19	11	0.2%	2.3%	4.9%	0.9%	-0.3%	-5.4%
Buildings	3	5	7	9	13	13	6	5.8%	2.9%	2.9%	4.1%	0.2%	-7.7%
Agriculture	2	3	5	6	5	4	2	6.6%	4.7%	2.5%	-2.5%	-3.3%	-3.6%
Transport	6	12	17	23	26	29	20	6.4%	3.9%	3.1%	1.2%	1.0%	-3.5%
Other	2	2	3	4	5	5	3	2.3%	5.0%	2.8%	1.0%	0.2%	-4.2%
CO <sub>2</sub> captured (CCS)	0	0	0	0	8	38	57	n.s.	n.s.	n.s.	n.s.	16.9%	4.1%
Coal	0	0	0	0	7	31	40	n.s.	n.s.	n.s.	n.s.	16.3%	2.7%
Gas	0	0	0	0	1	7	16	n.s.	n.s.	n.s.	n.s.	19.8%	8.5%
Biomass	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	15.0%	15.1%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	7	8	9	8	13	18	21	0.8%	1.9%	-0.8%	4.5%	3.1%	1.7%
Coal	0	0	0	0	0	0	0	-22.8%	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	5	4	4	3	4	5	3	-2.1%	0.2%	-2.6%	3.0%	1.8%	-5.0%
Natural gas	0	2	2	3	4	5	5	17.5%	3.7%	1.6%	3.8%	2.7%	0.1%
Biomass	1	2	2	2	2	2	2	2.7%	1.8%	-3.2%	3.6%	-0.1%	0.1%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	18.7%	17.7%
Hydro	0	0	0	0	0	0	0	-4.7%	16.8%	-2.9%	1.8%	0.7%	0.9%
Other renewables	0	0	0	1	2	5	10	n.s.	29.1%	19.9%	13.8%	8.1%	7.5%
Net Imports	6	11	17	28	32	37	32						
Coal	1	3	3	7	8	12	11						
Oil	4	7	11	16	14	12	8						
Natural gas	1	1	3	5	10	12	11						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	12	18	27	36	45	54	53	3.8%	3.9%	3.2%	2.2%	1.8%	-0.3%
Coal	1	3	3	7	8	12	11	8.2%	0.1%	8.9%	1.9%	4.3%	-0.5%
Oil	8	10	15	19	18	17	11	2.2%	4.0%	2.2%	-0.6%	-0.5%	-4.4%
Natural gas	1	3	5	8	14	17	17	8.2%	6.9%	3.8%	6.0%	2.1%	-0.3%
Biomass	1	2	2	2	2	2	2	2.7%	1.8%	-3.0%	3.4%	-0.1%	0.1%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	18.7%	17.7%
Hydro	0	0	0	0	0	0	0	-4.7%	16.8%	-2.9%	1.8%	0.7%	0.9%
Other renewables	0	0	0	1	2	5	10	n.s.	29.1%	19.9%	13.8%	8.1%	7.5%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	12	18	27	36	45	54	53	3.8%	3.9%	3.2%	2.2%	1.8%	-0.3%
Energy for Power Generation	4	5	8	12	17	24	31	3.7%	4.4%	3.9%	3.2%	3.7%	2.8%
Other Energy Transformation & Losses	1	1	1	2	3	4	4	1.0%	9.6%	2.9%	4.5%	2.0%	0.7%
Final consumption	9	14	20	27	33	39	36	4.2%	3.7%	3.0%	2.1%	1.5%	-0.7%
Steel, Non-Met. Minerals and Chem.	0	0	2	4	4	4	3	0.1%	20.9%	5.1%	0.9%	0.5%	-2.8%
Other Industry	3	3	3	4	5	6	6	1.3%	-2.5%	4.9%	2.7%	2.0%	-1.2%
Non-Energy Use	0	0	1	1	1	1	0	8.2%	4.4%	2.2%	-0.7%	-0.7%	-5.5%
Residential	2	3	5	5	6	6	6	4.5%	3.2%	1.1%	1.8%	0.6%	-0.3%
Services	1	1	2	2	3	4	5	3.6%	4.9%	1.4%	5.1%	2.8%	1.6%
Agriculture	1	1	2	2	3	3	4	6.5%	5.0%	2.6%	1.7%	1.6%	1.4%
Road	2	4	6	8	10	12	10	6.1%	3.7%	3.3%	2.1%	2.0%	-1.3%
Rail	0	0	0	0	0	0	0	5.6%	3.4%	1.5%	0.9%	0.6%	0.2%
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	7.4%	3.5%	3.7%	-0.5%
Other Transport	0	0	1	1	1	1	1	9.9%	5.3%	3.7%	2.2%	0.4%	-1.2%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Morocco & Tunisia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>4</b>	<b>5</b>	<b>8</b>	<b>11</b>	<b>14</b>	<b>19</b>	<b>21</b>	<b>3.8%</b>	<b>4.0%</b>	<b>3.7%</b>	<b>2.2%</b>	<b>2.9%</b>	<b>1.3%</b>
Coal	1	2	3	6	7	11	11	10.9%	2.7%	7.8%	1.2%	4.8%	-0.1%
Oil	2	1	1	1	2	1	1	-5.9%	1.8%	1.1%	0.6%	-0.8%	-3.8%
Gas	1	2	4	4	6	7	10	9.2%	6.1%	0.5%	4.1%	1.3%	3.7%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	2.7%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>15</b>	<b>23</b>	<b>40</b>	<b>62</b>	<b>97</b>	<b>146</b>	<b>199</b>	<b>4.3%</b>	<b>5.5%</b>	<b>4.5%</b>	<b>4.5%</b>	<b>4.2%</b>	<b>3.1%</b>
Coal	2	9	11	26	31	49	50	14.8%	2.2%	9.1%	1.7%	4.8%	0.2%
of which CCS	0	0	0	0	8	35	47	n.s.	n.s.	n.s.	n.s.	16.3%	2.9%
Oil	8	5	6	6	7	6	4	-5.8%	2.4%	0.8%	0.6%	-0.7%	-3.6%
Gas	4	9	19	21	32	37	59	9.6%	7.4%	0.9%	4.2%	1.7%	4.6%
of which CCS	0	0	0	0	3	18	43	n.s.	n.s.	n.s.	n.s.	19.4%	9.1%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	3.4%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	1.5%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	1	1	4	3	3	4	4	-4.7%	16.8%	-2.9%	1.8%	0.7%	0.9%
Wind	0	0	1	6	17	27	42	n.s.	23.5%	23.2%	11.1%	5.0%	4.5%
Solar	0	0	0	1	8	23	38	n.s.	n.s.	20.8%	30.4%	11.0%	5.2%
Other	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	36.3%	18.9%	20.0%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>4</b>	<b>7</b>	<b>10</b>	<b>15</b>	<b>27</b>	<b>43</b>	<b>62</b>	<b>6.8%</b>	<b>3.5%</b>	<b>3.9%</b>	<b>6.3%</b>	<b>4.7%</b>	<b>3.8%</b>
Coal	0	1	2	4	6	8	8	12.1%	2.1%	8.5%	4.0%	2.5%	0.2%
of which CCS	0	0	0	0	1	5	7	n.s.	n.s.	n.s.	n.s.	16.4%	3.9%
Oil	2	2	2	2	1	1	1	3.4%	-0.6%	-2.2%	-3.2%	-0.5%	-0.1%
Gas	1	2	4	4	5	6	10	10.7%	7.7%	-0.2%	2.6%	1.4%	5.1%
of which CCS	0	0	0	0	0	2	6	n.s.	n.s.	n.s.	n.s.	19.5%	9.7%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	3.3%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	1.4%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	1	2	2	2	3	3	3	4.3%	1.4%	1.8%	1.8%	0.7%	0.9%
Wind	0	0	0	3	7	12	18	n.s.	18.7%	22.5%	11.0%	4.9%	4.3%
Solar	0	0	0	0	5	14	22	n.s.	n.s.	21.0%	30.2%	10.8%	5.1%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	18.3%	19.4%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>9</b>	<b>14</b>	<b>20</b>	<b>27</b>	<b>33</b>	<b>39</b>	<b>36</b>	<b>4.2%</b>	<b>3.7%</b>	<b>3.0%</b>	<b>2.1%</b>	<b>1.5%</b>	<b>-0.7%</b>
Coal	0	1	0	1	1	1	1	2.8%	-30.6%	44.2%	6.7%	-0.1%	-4.9%
Oil	6	9	13	17	16	15	9	4.3%	4.1%	2.2%	-0.7%	-0.5%	-4.4%
Gas	0	1	1	3	7	9	6	6.1%	5.9%	11.5%	7.9%	2.4%	-4.9%
Electricity	1	2	3	5	7	11	15	5.2%	5.5%	3.9%	4.3%	4.1%	3.0%
Heat	0	0	0	0	0	0	3	n.s.	n.s.	5.2%	-2.3%	26.8%	21.5%
Biomass & Other	1	2	2	2	2	3	3	2.7%	1.8%	-3.2%	2.7%	1.3%	2.2%
Share of Renewables <sup>3</sup> (%)	17%	14%	13%	9%	13%	20%	37%	-1.6%	-0.6%	-4.2%	4.5%	3.8%	6.6%
<b>Industry (incl. non-energy use)</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>9</b>	<b>10</b>	<b>12</b>	<b>9</b>	<b>1.7%</b>	<b>3.1%</b>	<b>4.7%</b>	<b>1.6%</b>	<b>1.2%</b>	<b>-2.0%</b>
Coal	0	1	0	1	1	1	1	2.8%	-30.6%	44.2%	6.7%	-0.1%	-4.9%
Oil	2	2	3	4	3	2	1	-0.4%	5.5%	2.4%	-3.2%	-3.4%	-6.8%
Gas	0	0	1	2	3	4	3	5.1%	5.5%	6.9%	6.1%	3.5%	-3.2%
Electricity	1	1	1	2	3	4	5	4.3%	3.1%	5.6%	3.5%	3.1%	1.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	1.1%	0.4%	1.3%	-6.0%	-8.3%
<b>Buildings</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>9</b>	<b>11</b>	<b>11</b>	<b>4.2%</b>	<b>3.7%</b>	<b>1.2%</b>	<b>2.8%</b>	<b>1.4%</b>	<b>0.5%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	2	2	1	1	1	5.5%	2.5%	-2.1%	-1.5%	-1.5%	-6.4%
Gas	0	0	0	2	4	4	2	10.1%	6.9%	18.7%	8.5%	0.9%	-8.2%
Electricity	0	1	2	2	3	4	6	6.4%	7.6%	2.5%	3.0%	3.6%	3.2%
Heat	0	0	0	0	0	0	3	n.s.	n.s.	5.2%	-2.3%	26.8%	21.5%
Biomass & Other	1	2	2	1	1	1	0	2.3%	1.8%	-4.1%	-3.6%	-4.8%	-9.2%
<b>Agriculture</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>6.5%</b>	<b>5.0%</b>	<b>2.6%</b>	<b>1.7%</b>	<b>1.6%</b>	<b>1.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	2	2	2	1	1	6.6%	4.7%	2.5%	-2.5%	-3.3%	-3.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	1.6%	-1.4%	-2.0%	-2.2%
Electricity	0	0	0	0	1	1	2	6.1%	6.9%	3.2%	10.0%	5.6%	3.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	50.2%	6.7%	2.7%
<b>Transport</b>	<b>2</b>	<b>4</b>	<b>7</b>	<b>9</b>	<b>11</b>	<b>13</b>	<b>12</b>	<b>6.3%</b>	<b>3.8%</b>	<b>3.3%</b>	<b>2.1%</b>	<b>1.8%</b>	<b>-1.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	4	6	9	10	10	7	6.3%	3.8%	3.1%	0.8%	0.8%	-3.8%
Gas	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	22.4%	6.4%	-0.6%
Electricity	0	0	0	0	0	1	2	2.8%	-1.8%	7.9%	23.0%	9.7%	6.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	2	n.s.	n.s.	n.s.	17.9%	4.4%	5.9%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>1.0%</b>	<b>9.6%</b>	<b>2.9%</b>	<b>4.5%</b>	<b>2.0%</b>	<b>0.7%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

South Africa	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	37	45	52	57	60	63	66	2.0%	1.4%	0.9%	0.6%	0.5%	0.4%
GDP per capita (ppp, k\$'05)	8	7	9	10	14	18	22	-0.2%	2.1%	1.1%	2.8%	3.0%	1.8%
GDP per capita (mer, k\$'05)	5	5	6	6	8	11	14	-0.2%	2.0%	1.0%	2.8%	3.0%	1.8%
Share Value Added - Agriculture (%)	5	3	3	3	2	2	2	-3.4%	-2.4%	-0.2%	-0.7%	-0.5%	-0.3%
Share Value Added - Industry (%)	40	32	30	28	26	23	20	-2.3%	-0.6%	-0.6%	-0.9%	-1.3%	-1.0%
Share Value Added - Services (%)	55	65	68	69	72	75	77	1.6%	0.4%	0.3%	0.3%	0.4%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	18	23	-6.5%	7.4%	-4.3%	1.5%	2.3%	2.9%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	18	21	30	38	49	38	33	1.4%	3.8%	2.3%	2.5%	-2.4%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	354	404	514	514	450	310	182	1.3%	2.4%	0.0%	-1.3%	-3.6%	-5.2%
Total GHG (excl. sinks)	354	407	514	514	451	312	184	1.4%	2.4%	0.0%	-1.3%	-3.6%	-5.1%
Total GHG (energy, industry, agriculture)	350	404	513	502	449	278	167	1.4%	2.4%	-0.2%	-1.1%	-4.7%	-5.0%
CO <sub>2</sub>	278	326	429	424	383	229	127	1.6%	2.8%	-0.1%	-1.0%	-5.0%	-5.7%
CH <sub>4</sub>	51	57	63	57	46	31	23	1.2%	1.0%	-1.0%	-2.1%	-3.7%	-3.2%
N <sub>2</sub> O	20	19	18	19	18	16	15	-0.4%	-0.4%	0.5%	-0.4%	-1.3%	-0.4%
F gases	1	2	3	2	2	2	2	0.6%	5.2%	-0.9%	-4.1%	-0.2%	0.1%
Total GHG from Energy and Industry	319	372	479	466	416	251	142	1.6%	2.6%	-0.3%	-1.1%	-4.9%	-5.6%
CO <sub>2</sub> Emissions from Fuel Comb.	257	306	408	391	346	188	103	1.8%	2.9%	-0.4%	-1.2%	-5.9%	-5.8%
Power generation/District heating	142	188	242	189	164	46	1	2.8%	2.6%	-2.4%	-1.4%	-11.9%	-31.1%
Industry	35	33	45	36	32	21	10	-0.6%	3.1%	-2.3%	-1.1%	-4.2%	-6.8%
Buildings	11	9	17	27	18	8	4	-2.2%	6.3%	4.9%	-4.3%	-7.9%	-7.1%
Agriculture	3	4	3	6	6	4	2	2.1%	-1.1%	6.1%	-0.8%	-4.1%	-4.3%
Transport	29	36	42	50	49	45	31	2.0%	1.5%	1.8%	-0.1%	-0.9%	-3.9%
Other	36	36	59	84	78	64	55	0.1%	5.0%	3.6%	-0.8%	-1.8%	-1.5%
CO <sub>2</sub> captured (CCS)	0	0	0	0	7	83	126	n.s.	n.s.	n.s.	n.s.	27.3%	4.3%
Coal	0	0	0	0	7	73	87	n.s.	n.s.	n.s.	n.s.	26.0%	1.8%
Gas	0	0	0	0	0	5	12	n.s.	n.s.	n.s.	n.s.	44.3%	8.3%
Biomass	0	0	0	0	0	5	27	n.s.	n.s.	n.s.	n.s.	n.s.	19.1%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	110	151	165	164	208	196	239	3.2%	0.9%	-0.1%	2.4%	-0.6%	2.0%
Coal	98	136	150	146	174	130	168	3.3%	1.0%	-0.3%	1.8%	-2.9%	2.6%
Oil	0	1	0	0	0	0	0	n.s.	-16.6%	1.9%	1.9%	0.7%	n.s.
Natural gas	2	1	0	1	8	23	26	-0.8%	-10.4%	11.6%	18.2%	11.6%	1.5%
Biomass	8	9	11	9	13	18	16	1.9%	1.4%	-1.3%	3.6%	2.8%	-1.2%
Nuclear <sup>1</sup>	2	3	3	4	8	17	15	4.4%	-0.7%	2.3%	6.8%	8.1%	-0.9%
Hydro	0	0	0	1	1	1	1	3.3%	2.6%	2.4%	3.7%	2.6%	1.0%
Other renewables	0	0	0	2	4	8	13	n.s.	n.s.	35.7%	8.6%	6.9%	4.3%
Net Imports	-22	-45	-25	-38	-80	-73	-124						
Coal	-30	-54	-48	-66	-108	-88	-132						
Oil	8	8	20	23	21	18	11						
Natural gas	-1	0	3	3	5	-5	-12						
Biomass	0	0	0	2	2	1	7						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	1	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	88	107	140	126	128	123	115	2.0%	2.8%	-1.0%	0.2%	-0.4%	-0.7%
Coal	69	82	102	80	67	42	36	1.8%	2.2%	-2.4%	-1.8%	-4.6%	-1.3%
Oil	8	9	20	23	21	19	11	0.3%	8.5%	1.6%	-0.7%	-1.3%	-5.1%
Natural gas	0	1	4	5	12	18	14	10.9%	10.7%	2.4%	9.8%	3.5%	-1.9%
Biomass	8	9	11	12	15	19	23	1.9%	1.4%	0.8%	2.8%	2.3%	1.8%
Nuclear <sup>1</sup>	2	3	3	4	8	17	15	4.4%	-0.7%	2.3%	6.8%	8.1%	-0.9%
Hydro	0	0	0	1	1	1	1	3.3%	2.6%	2.4%	3.7%	2.6%	1.0%
Other renewables	0	0	0	2	4	8	13	n.s.	n.s.	35.7%	8.6%	6.9%	4.3%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	88	107	140	126	128	123	115	2.0%	2.8%	-1.0%	0.2%	-0.4%	-0.7%
Energy for Power Generation	38	51	64	55	61	68	74	3.0%	2.4%	-1.7%	1.0%	1.2%	0.8%
Other Energy Transformation & Losses	10	14	23	16	17	16	16	3.9%	5.1%	-3.4%	0.1%	-0.6%	0.3%
Final consumption	52	57	70	72	74	69	60	0.8%	2.1%	0.3%	0.2%	-0.7%	-1.3%
Steel, Non-Met. Minerals and Chem.	10	7	10	10	10	7	4	-3.5%	3.4%	-0.1%	0.1%	-3.6%	-5.0%
Other Industry	13	14	18	15	14	12	11	1.0%	2.7%	-1.9%	-0.2%	-1.5%	-0.9%
Non-Energy Use	4	6	4	2	2	2	1	2.8%	-2.6%	-5.8%	-0.4%	-1.2%	-3.7%
Residential	10	12	15	16	15	13	11	1.5%	2.2%	0.9%	-0.6%	-1.4%	-1.9%
Services	3	4	5	6	6	6	7	2.5%	1.8%	2.6%	-0.1%	0.2%	1.0%
Agriculture	1	2	2	2	3	3	4	1.8%	0.3%	4.3%	1.5%	1.4%	1.0%
Road	9	11	15	18	20	22	19	1.8%	3.0%	1.9%	1.0%	0.7%	-1.3%
Rail	0	1	0	0	1	1	1	5.2%	-6.5%	3.0%	1.8%	1.8%	0.9%
Aviation	0	1	1	1	2	2	2	5.2%	5.0%	1.8%	3.0%	2.1%	-1.0%
Other Transport	0	0	0	0	0	0	0	n.s.	4.5%	32.2%	1.7%	-0.8%	-2.4%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

South Africa	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>36</b>	<b>47</b>	<b>61</b>	<b>48</b>	<b>48</b>	<b>42</b>	<b>44</b>	<b>2.9%</b>	<b>2.6%</b>	<b>-2.3%</b>	<b>-0.1%</b>	<b>-1.3%</b>	<b>0.6%</b>
Coal	36	47	61	47	39	25	23	2.8%	2.6%	-2.6%	-1.9%	-4.3%	-0.6%
Oil	0	0	0	0	1	1	1	n.s.	n.s.	21.5%	6.7%	4.9%	-1.0%
Gas	0	0	0	1	6	10	9	n.s.	n.s.	n.s.	25.3%	4.0%	-0.6%
Biomass & Waste	0	0	0	0	2	6	11	n.s.	-0.7%	16.2%	16.2%	12.3%	5.8%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>167</b>	<b>211</b>	<b>260</b>	<b>243</b>	<b>299</b>	<b>363</b>	<b>427</b>	<b>2.3%</b>	<b>2.1%</b>	<b>-0.7%</b>	<b>2.1%</b>	<b>2.0%</b>	<b>1.6%</b>
Coal	156	193	242	196	171	117	111	2.2%	2.3%	-2.1%	-1.3%	-3.7%	-0.5%
of which CCS	0	0	0	0	8	83	102	n.s.	n.s.	n.s.	n.s.	25.7%	2.0%
Oil	0	0	0	1	3	5	4	n.s.	n.s.	21.3%	7.1%	5.4%	-0.8%
Gas	0	0	0	4	33	53	52	n.s.	n.s.	n.s.	23.1%	4.7%	-0.1%
of which CCS	0	0	0	0	0	15	33	n.s.	n.s.	n.s.	n.s.	46.3%	8.5%
Biomass & Waste	0	0	0	1	9	30	55	n.s.	-0.7%	16.9%	20.2%	13.3%	6.3%
of which CCS	0	0	0	0	0	5	26	n.s.	n.s.	n.s.	n.s.	n.s.	18.6%
Nuclear	8	13	12	15	31	68	62	4.4%	-0.7%	2.3%	7.3%	8.3%	-0.9%
Hydro	3	4	5	6	9	12	13	3.3%	2.6%	2.4%	3.7%	2.6%	1.0%
Wind	0	0	0	12	23	49	76	n.s.	n.s.	n.s.	6.5%	7.9%	4.5%
Solar	0	0	0	7	21	29	50	n.s.	n.s.	41.3%	11.8%	3.4%	5.6%
Other	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	33.1%	22.8%	17.9%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>35</b>	<b>41</b>	<b>44</b>	<b>59</b>	<b>77</b>	<b>96</b>	<b>125</b>	<b>1.7%</b>	<b>0.7%</b>	<b>2.9%</b>	<b>2.8%</b>	<b>2.2%</b>	<b>2.6%</b>
Coal	31	37	38	39	35	23	19	1.8%	0.2%	0.3%	-1.2%	-4.0%	-1.7%
of which CCS	0	0	0	0	1	11	16	n.s.	n.s.	n.s.	n.s.	25.9%	3.3%
Oil	0	0	0	0	0	1	1	29.8%	0.0%	-0.1%	1.3%	6.8%	4.2%
Gas	0	0	2	3	6	10	12	n.s.	n.s.	5.2%	5.1%	5.9%	1.6%
of which CCS	0	0	0	0	0	2	5	n.s.	n.s.	n.s.	n.s.	46.6%	9.2%
Biomass & Waste	0	0	0	0	1	4	7	n.s.	0.0%	13.7%	18.2%	13.2%	6.2%
of which CCS	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	n.s.	n.s.	18.5%
Nuclear	2	2	2	2	4	8	8	0.0%	0.0%	0.3%	7.3%	8.3%	-0.9%
Hydro	2	2	2	3	4	6	6	0.3%	0.1%	4.2%	3.7%	2.6%	1.0%
Wind	0	0	0	5	10	21	32	n.s.	n.s.	n.s.	6.5%	8.1%	4.4%
Solar	0	0	0	6	18	23	39	n.s.	n.s.	47.7%	11.8%	2.8%	5.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	22.2%	17.4%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>52</b>	<b>57</b>	<b>70</b>	<b>72</b>	<b>74</b>	<b>69</b>	<b>60</b>	<b>0.8%</b>	<b>2.1%</b>	<b>0.3%</b>	<b>0.2%</b>	<b>-0.7%</b>	<b>-1.3%</b>
Coal	17	16	16	16	12	4	2	-0.9%	-0.1%	0.3%	-2.7%	-10.5%	-9.2%
Oil	15	16	23	25	23	20	13	0.7%	3.6%	1.0%	-0.8%	-1.3%	-4.2%
Gas	0	1	4	3	5	7	5	5.6%	15.2%	-0.1%	4.2%	3.4%	-4.3%
Electricity	12	15	17	16	20	25	29	2.3%	1.5%	-0.6%	2.2%	1.9%	1.6%
Heat	0	0	0	0	1	2	2	n.s.	n.s.	13.6%	8.2%	11.8%	1.2%
Biomass & Other	8	9	11	11	12	11	9	1.8%	1.5%	0.1%	1.0%	-1.2%	-1.1%
Share of Renewables <sup>3</sup> (%)	16%	17%	16%	18%	24%	36%	55%	0.8%	-0.8%	1.3%	3.0%	4.0%	4.4%
<b>Industry (incl. non-energy use)</b>	<b>27</b>	<b>27</b>	<b>32</b>	<b>27</b>	<b>27</b>	<b>21</b>	<b>17</b>	<b>-0.2%</b>	<b>2.0%</b>	<b>-1.7%</b>	<b>-0.1%</b>	<b>-2.2%</b>	<b>-2.3%</b>
Coal	15	14	12	10	9	3	1	-0.4%	-1.5%	-2.3%	-1.1%	-9.2%	-8.4%
Oil	4	2	4	4	3	3	1	-6.5%	9.4%	-2.1%	-1.8%	-1.8%	-6.0%
Gas	0	1	4	3	3	5	3	5.5%	15.6%	-1.4%	0.7%	3.5%	-4.3%
Electricity	7	8	10	9	10	10	11	1.6%	2.2%	-0.9%	0.8%	-0.1%	0.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	2	2	2	2	1	1	1.3%	1.6%	-1.8%	1.9%	-5.8%	-6.4%
<b>Buildings</b>	<b>14</b>	<b>16</b>	<b>20</b>	<b>23</b>	<b>21</b>	<b>20</b>	<b>18</b>	<b>1.7%</b>	<b>2.1%</b>	<b>1.4%</b>	<b>-0.5%</b>	<b>-0.9%</b>	<b>-0.9%</b>
Coal	2	1	3	6	3	1	0	-4.6%	8.3%	6.1%	-5.8%	-15.5%	-15.8%
Oil	1	1	1	1	1	1	0	5.1%	1.6%	-1.6%	-2.6%	-2.4%	-5.0%
Gas	0	0	0	0	1	1	1	8.2%	-4.5%	25.4%	15.8%	4.2%	-4.7%
Electricity	4	6	6	6	7	9	11	3.4%	0.7%	-0.3%	2.1%	2.3%	1.8%
Heat	0	0	0	0	1	2	2	n.s.	n.s.	13.6%	8.2%	11.8%	1.2%
Biomass & Other	6	8	9	9	8	6	4	1.9%	1.4%	0.2%	-0.6%	-3.5%	-5.0%
<b>Agriculture</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>1.8%</b>	<b>0.3%</b>	<b>4.3%</b>	<b>1.5%</b>	<b>1.4%</b>	<b>1.0%</b>
Coal	0	0	0	0	0	0	0	3.3%	-0.3%	23.1%	-2.8%	-7.5%	-7.5%
Oil	1	1	1	1	1	1	1	2.1%	-1.2%	4.0%	-0.2%	-3.4%	-3.9%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	1	1	1	1	1	0.8%	4.1%	0.6%	3.3%	3.6%	2.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	55.1%	12.3%	3.5%
<b>Transport</b>	<b>10</b>	<b>12</b>	<b>16</b>	<b>20</b>	<b>22</b>	<b>24</b>	<b>21</b>	<b>2.1%</b>	<b>2.8%</b>	<b>2.0%</b>	<b>1.2%</b>	<b>0.8%</b>	<b>-1.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	10	12	16	19	18	16	11	2.1%	3.0%	1.7%	-0.5%	-1.1%	-3.9%
Gas	0	0	0	0	1	1	1	n.s.	n.s.	n.s.	17.2%	2.3%	-3.7%
Electricity	0	0	0	0	2	4	6	2.9%	-4.1%	2.6%	18.2%	7.6%	3.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	3	4	n.s.	n.s.	n.s.	17.2%	7.3%	4.2%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>10</b>	<b>14</b>	<b>23</b>	<b>16</b>	<b>17</b>	<b>16</b>	<b>16</b>	<b>3.9%</b>	<b>5.1%</b>	<b>-3.4%</b>	<b>0.1%</b>	<b>-0.6%</b>	<b>0.3%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Rest Sub Saharan Africa	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	475	625	825	1 084	1 393	1 749	2 138	2.8%	2.8%	2.8%	2.5%	2.3%	2.0%
GDP per capita (ppp, k\$'05)	1	1	1	2	3	4	6	-0.3%	3.6%	3.0%	3.8%	4.0%	4.0%
GDP per capita (mer, k\$'05)	1	0	1	1	1	2	3	-0.5%	3.5%	2.9%	3.8%	4.0%	4.0%
Share Value Added - Agriculture (%)	31	27	22	14	9	7	5	-1.5%	-1.7%	-4.5%	-4.4%	-3.2%	-2.2%
Share Value Added - Industry (%)	29	34	36	39	41	42	41	1.7%	0.7%	0.6%	0.6%	0.2%	-0.2%
Share Value Added - Services (%)	40	40	41	47	50	51	53	-0.2%	0.5%	1.4%	0.5%	0.3%	0.4%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	18	23	-6.5%	7.4%	-4.3%	1.5%	2.3%	2.9%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	18	21	30	38	49	38	33	1.4%	3.8%	2.3%	2.5%	-2.4%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	1 707	1 843	1 880	2 457	1 958	1 471	1 144	0.8%	0.2%	2.7%	-2.2%	-2.8%	-2.5%
Total GHG (excl. sinks)	1 707	1 843	1 880	2 457	2 165	2 386	2 251	0.8%	0.2%	2.7%	-1.3%	1.0%	-0.6%
Total GHG (energy, industry, agriculture)	635	760	886	1 238	1 492	1 436	782	1.8%	1.5%	3.4%	1.9%	-0.4%	-5.9%
CO <sub>2</sub>	166	210	243	451	773	857	383	2.4%	1.5%	6.4%	5.5%	1.0%	-7.7%
CH <sub>4</sub>	310	394	454	583	532	422	258	2.4%	1.4%	2.5%	-0.9%	-2.3%	-4.8%
N <sub>2</sub> O	157	155	186	201	183	152	133	-0.2%	1.9%	0.8%	-0.9%	-1.8%	-1.3%
F gases	2	2	2	4	4	6	9	-0.2%	3.7%	3.6%	1.1%	3.5%	4.4%
Total GHG from Energy and Industry	335	401	461	791	1 114	1 134	544	1.8%	1.4%	5.6%	3.5%	0.2%	-7.1%
CO <sub>2</sub> Emissions from Fuel Comb.	105	132	194	360	581	592	185	2.3%	4.0%	6.4%	4.9%	0.2%	-11.0%
Power generation/District heating	20	27	41	102	175	88	-114	3.1%	4.1%	9.7%	5.5%	-6.7%	n.s.
Industry	22	20	30	58	104	117	30	-1.1%	4.2%	6.8%	6.1%	1.2%	-12.7%
Buildings	13	17	24	37	52	49	22	2.7%	3.4%	4.4%	3.6%	-0.8%	-7.7%
Agriculture	2	4	4	5	5	4	3	6.3%	0.3%	2.1%	0.7%	-3.3%	-3.3%
Transport	38	52	81	134	203	286	279	3.2%	4.5%	5.1%	4.2%	3.5%	-0.2%
Other	9	11	14	24	41	49	-35	2.1%	2.3%	5.5%	5.5%	1.9%	n.s.
CO <sub>2</sub> captured (CCS)	0	0	0	0	3	110	408	n.s.	n.s.	n.s.	n.s.	44.6%	14.0%
Coal	0	0	0	0	3	60	85	n.s.	n.s.	n.s.	n.s.	37.3%	3.6%
Gas	0	0	0	0	0	14	26	n.s.	n.s.	n.s.	n.s.	54.2%	6.5%
Biomass	0	0	0	0	0	36	297	n.s.	n.s.	n.s.	n.s.	n.s.	23.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	303	397	582	622	719	784	730	2.7%	3.9%	0.7%	1.5%	0.9%	-0.7%
Coal	5	5	3	39	13	11	9	-0.9%	-3.6%	28.5%	-10.2%	-1.7%	-2.1%
Oil	146	190	283	303	302	282	59	2.7%	4.1%	0.7%	0.0%	-0.7%	-14.5%
Natural gas	4	12	46	58	94	107	97	11.5%	14.8%	2.4%	5.0%	1.2%	-0.9%
Biomass	144	185	240	204	279	331	478	2.5%	2.6%	-1.6%	3.2%	1.7%	3.7%
Nuclear <sup>1</sup>	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	31.1%	18.4%
Hydro	4	5	8	9	11	13	16	3.1%	4.5%	1.0%	2.0%	2.2%	2.2%
Other renewables	0	0	1	10	20	39	69	3.0%	13.1%	22.3%	7.3%	7.1%	6.0%
Net Imports	-120	-160	-261	-205	-177	-143	9						
Coal	0	0	0	-21	24	25	17						
Oil	-120	-156	-229	-221	-188	-144	68						
Natural gas	0	-4	-32	-29	-38	-21	-25						
Biomass	0	0	0	67	33	5	-47						
Biofuels	0	0	0	-2	-8	-8	-6						
Electricity	0	0	0	1	1	1	1						
Primary Energy Demand <sup>2</sup>	183	236	321	417	542	641	739	2.6%	3.1%	2.6%	2.7%	1.7%	1.4%
Coal	5	4	4	17	37	36	26	-2.0%	-1.5%	17.2%	7.9%	-0.2%	-3.1%
Oil	26	34	54	82	114	139	127	2.8%	4.7%	4.3%	3.4%	1.9%	-0.9%
Natural gas	4	8	14	29	56	85	72	7.2%	6.1%	7.7%	6.9%	4.2%	-1.7%
Biomass	144	185	240	271	312	336	431	2.5%	2.6%	1.2%	1.4%	0.8%	2.5%
Nuclear <sup>1</sup>	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	31.1%	18.4%
Hydro	4	5	8	9	11	13	16	3.1%	4.5%	1.0%	2.0%	2.2%	2.2%
Other renewables	0	0	1	10	20	39	69	3.0%	13.1%	22.3%	7.3%	7.1%	6.0%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	183	236	321	417	542	641	739	2.6%	3.1%	2.6%	2.7%	1.7%	1.4%
Energy for Power Generation	11	15	24	53	89	127	206	3.5%	4.9%	8.1%	5.4%	3.6%	5.0%
Other Energy Transformation & Losses	3	4	6	12	30	46	93	2.4%	3.9%	6.9%	9.9%	4.4%	7.3%
Final consumption	174	223	301	372	461	537	576	2.6%	3.0%	2.1%	2.2%	1.5%	0.7%
Steel, Non-Met. Minerals and Chem.	2	1	1	3	8	11	9	-3.9%	0.1%	11.2%	9.4%	2.7%	-1.7%
Other Industry	14	17	28	41	58	73	82	2.4%	5.0%	3.8%	3.5%	2.3%	1.2%
Non-Energy Use	1	1	2	3	6	10	13	0.8%	4.4%	6.5%	6.6%	5.1%	2.5%
Residential	136	174	226	251	274	282	275	2.5%	2.7%	1.1%	0.9%	0.3%	-0.2%
Services	6	9	10	18	27	33	40	3.3%	1.6%	5.8%	4.4%	2.0%	1.8%
Agriculture	1	2	2	3	3	4	4	4.6%	1.0%	1.8%	1.3%	1.4%	1.3%
Road	12	18	30	50	80	118	144	4.0%	5.4%	5.2%	4.8%	3.9%	2.0%
Rail	0	0	0	0	0	0	0	-5.7%	-0.8%	2.9%	1.8%	2.2%	2.5%
Aviation	0	0	1	2	3	5	7	4.2%	7.8%	6.5%	6.9%	5.8%	3.3%
Other Transport	0	0	0	0	1	1	1	-1.1%	2.2%	5.5%	5.0%	2.6%	1.0%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest Sub Saharan Africa	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>7</b>	<b>9</b>	<b>15</b>	<b>34</b>	<b>59</b>	<b>74</b>	<b>119</b>	<b>3.8%</b>	<b>4.7%</b>	<b>8.6%</b>	<b>5.6%</b>	<b>2.4%</b>	<b>4.8%</b>
Coal	2	2	1	12	25	25	22	-1.2%	-3.1%	23.7%	7.6%	0.2%	-1.5%
Oil	2	3	6	9	13	9	9	4.3%	5.9%	3.9%	3.6%	-3.4%	0.4%
Gas	2	4	7	12	17	21	22	7.1%	6.1%	5.6%	3.6%	2.5%	0.4%
Biomass & Waste	0	0	1	1	4	18	65	5.9%	5.0%	6.2%	13.9%	16.8%	13.7%
Other	0	0	0	1	1	1	1	2.9%	13.0%	21.6%	4.2%	-1.0%	0.7%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>66</b>	<b>90</b>	<b>148</b>	<b>266</b>	<b>479</b>	<b>802</b>	<b>1 320</b>	<b>3.1%</b>	<b>5.2%</b>	<b>6.0%</b>	<b>6.1%</b>	<b>5.3%</b>	<b>5.1%</b>
Coal	6	5	5	53	119	121	106	-1.5%	-1.4%	27.7%	8.5%	0.1%	-1.3%
of which CCS	0	0	0	0	2	60	90	n.s.	n.s.	n.s.	n.s.	40.9%	4.2%
Oil	8	12	20	39	55	39	41	3.9%	5.4%	6.6%	3.6%	-3.4%	0.4%
Gas	7	12	29	52	82	114	122	5.3%	8.9%	6.0%	4.7%	3.3%	0.7%
of which CCS	0	0	0	0	0	28	59	n.s.	n.s.	n.s.	n.s.	n.s.	7.9%
Biomass & Waste	0	1	1	3	16	85	325	6.4%	3.7%	9.8%	17.6%	18.0%	14.4%
of which CCS	0	0	0	0	0	40	235	n.s.	n.s.	n.s.	n.s.	n.s.	19.5%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	44	59	91	101	123	153	190	3.1%	4.5%	1.0%	2.0%	2.2%	2.2%
Wind	0	0	0	5	39	128	234	21.5%	8.6%	n.s.	22.7%	12.5%	6.2%
Solar	0	0	0	3	28	147	276	n.s.	32.1%	26.8%	26.0%	17.9%	6.5%
Other	0	0	1	10	16	16	25	2.9%	13.0%	21.6%	4.3%	0.0%	4.8%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>23</b>	<b>27</b>	<b>41</b>	<b>71</b>	<b>130</b>	<b>273</b>	<b>436</b>	<b>1.6%</b>	<b>4.2%</b>	<b>5.6%</b>	<b>6.2%</b>	<b>7.7%</b>	<b>4.8%</b>
Coal	2	2	2	8	18	24	21	-0.4%	1.3%	14.0%	9.3%	2.9%	-1.6%
of which CCS	0	0	0	0	0	9	16	n.s.	n.s.	n.s.	n.s.	42.2%	6.3%
Oil	4	5	8	22	32	35	32	1.1%	5.1%	10.6%	4.1%	1.0%	-1.1%
Gas	3	6	11	14	15	24	30	8.1%	6.6%	3.0%	0.7%	4.8%	2.0%
of which CCS	0	0	0	0	0	4	10	n.s.	n.s.	n.s.	n.s.	n.s.	9.7%
Biomass & Waste	0	0	0	0	2	13	52	1.0%	5.9%	4.4%	17.2%	18.9%	14.7%
of which CCS	0	0	0	0	0	6	35	n.s.	n.s.	n.s.	n.s.	n.s.	20.2%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	15	15	20	22	27	34	42	0.3%	3.0%	1.0%	2.0%	2.2%	2.2%
Wind	0	0	0	2	16	54	97	n.s.	13.0%	n.s.	22.6%	12.5%	6.1%
Solar	0	0	0	2	17	86	159	n.s.	29.7%	28.3%	26.2%	17.8%	6.3%
Other	0	0	0	1	2	2	4	4.1%	12.0%	20.1%	3.7%	2.2%	4.4%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>174</b>	<b>223</b>	<b>301</b>	<b>372</b>	<b>461</b>	<b>537</b>	<b>576</b>	<b>2.6%</b>	<b>3.0%</b>	<b>2.1%</b>	<b>2.2%</b>	<b>1.5%</b>	<b>0.7%</b>
Coal	3	2	2	5	11	9	3	-2.5%	0.3%	9.7%	8.0%	-2.6%	-9.5%
Oil	21	29	46	71	99	128	116	2.9%	4.8%	4.5%	3.4%	2.5%	-0.9%
Gas	1	2	4	10	26	43	32	5.3%	6.1%	11.1%	10.0%	5.3%	-3.0%
Electricity	4	6	10	19	34	57	94	3.4%	5.6%	6.2%	6.0%	5.4%	5.0%
Heat	0	0	0	0	0	3	12	n.s.	n.s.	18.7%	37.8%	28.8%	15.1%
Biomass & Other	144	185	240	267	290	296	318	2.5%	2.6%	1.1%	0.8%	0.2%	0.7%
Share of Renewables <sup>3</sup> (%)	84%	84%	81%	73%	66%	64%	78%	0.0%	-0.3%	-1.0%	-1.1%	-0.3%	2.0%
<b>Industry (incl. non-energy use)</b>	<b>16</b>	<b>20</b>	<b>31</b>	<b>47</b>	<b>72</b>	<b>94</b>	<b>105</b>	<b>1.7%</b>	<b>4.7%</b>	<b>4.3%</b>	<b>4.3%</b>	<b>2.7%</b>	<b>1.1%</b>
Coal	2	1	1	4	11	9	3	-3.4%	-1.2%	13.4%	9.4%	-2.3%	-9.6%
Oil	5	4	6	9	12	14	12	-0.3%	3.9%	3.6%	2.6%	1.6%	-1.6%
Gas	1	1	4	7	15	27	19	2.3%	9.2%	7.8%	7.4%	6.0%	-3.5%
Electricity	2	3	4	8	15	23	35	2.1%	4.2%	7.2%	5.8%	4.6%	4.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	7	10	16	18	20	21	35	3.9%	5.1%	1.4%	0.8%	0.7%	5.4%
<b>Buildings</b>	<b>143</b>	<b>183</b>	<b>236</b>	<b>269</b>	<b>302</b>	<b>315</b>	<b>315</b>	<b>2.5%</b>	<b>2.6%</b>	<b>1.3%</b>	<b>1.1%</b>	<b>0.4%</b>	<b>0.0%</b>
Coal	0	0	0	0	0	0	0	-2.8%	6.1%	1.8%	-3.0%	-14.4%	-15.8%
Oil	4	5	7	9	10	7	3	2.4%	4.0%	2.8%	0.5%	-3.4%	-8.7%
Gas	0	0	0	2	9	11	6	n.s.	n.s.	n.s.	13.8%	2.7%	-6.9%
Electricity	2	3	6	10	17	27	43	4.9%	7.0%	5.5%	5.3%	4.8%	4.7%
Heat	0	0	0	0	0	3	12	n.s.	n.s.	18.7%	37.8%	28.8%	15.1%
Biomass & Other	137	174	223	247	266	266	251	2.4%	2.5%	1.0%	0.7%	0.0%	-0.6%
<b>Agriculture</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>4.6%</b>	<b>1.0%</b>	<b>1.8%</b>	<b>1.3%</b>	<b>1.4%</b>	<b>1.3%</b>
Coal	0	0	0	0	0	0	0	6.1%	0.7%	0.4%	-1.3%	-6.9%	-7.5%
Oil	0	1	1	1	1	1	1	6.4%	0.0%	3.3%	1.7%	-2.1%	-2.5%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	1	1	2.9%	-0.7%	4.4%	4.5%	6.4%	4.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	1	1	1	1	2	2	3.2%	2.1%	0.7%	1.0%	3.8%	2.2%
<b>Transport</b>	<b>13</b>	<b>19</b>	<b>32</b>	<b>52</b>	<b>84</b>	<b>124</b>	<b>152</b>	<b>3.8%</b>	<b>5.3%</b>	<b>5.2%</b>	<b>4.8%</b>	<b>4.0%</b>	<b>2.1%</b>
Coal	0	0	0	0	0	0	0	-21.2%	1.4%	0.3%	0.0%	0.0%	0.0%
Oil	13	19	31	52	77	106	101	3.9%	5.3%	5.1%	4.0%	3.3%	-0.5%
Gas	0	0	0	0	2	5	7	n.s.	n.s.	n.s.	26.6%	9.6%	4.3%
Electricity	0	0	0	0	2	6	14	n.s.	4.7%	33.4%	43.8%	14.0%	9.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	4	7	30	n.s.	n.s.	n.s.	22.0%	7.1%	14.7%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>12</b>	<b>30</b>	<b>46</b>	<b>93</b>	<b>2.4%</b>	<b>3.9%</b>	<b>6.9%</b>	<b>9.9%</b>	<b>4.4%</b>	<b>7.3%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Iran	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	56	66	74	83	89	91	92	1.6%	1.2%	1.2%	0.6%	0.3%	0.1%
GDP per capita (ppp, k\$'05)	6	7	11	11	17	24	31	2.1%	4.0%	0.4%	3.7%	3.7%	2.7%
GDP per capita (mer, k\$'05)	2	2	3	3	5	7	9	2.1%	3.8%	0.4%	3.7%	3.7%	2.7%
Share Value Added - Agriculture (%)	9	6	1	1	1	0	0	-5.1%	-15.7%	-5.4%	-1.3%	-0.9%	-0.5%
Share Value Added - Industry (%)	42	49	50	48	46	43	40	1.5%	0.1%	-0.3%	-0.5%	-0.7%	-0.7%
Share Value Added - Services (%)	48	45	49	51	54	57	60	-0.7%	0.9%	0.4%	0.4%	0.6%	0.5%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	18	21	26	-7.8%	10.3%	-2.2%	1.3%	1.2%	2.4%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	28	24	47	43	46	38	32	-1.2%	6.8%	-0.9%	0.8%	-2.0%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	299	472	706	916	898	595	410	4.7%	4.1%	2.6%	-0.2%	-4.0%	-3.7%
Total GHG (excl. sinks)	299	472	709	918	906	604	420	4.6%	4.2%	2.6%	-0.1%	-4.0%	-3.6%
Total GHG (energy, industry, agriculture)	299	472	709	918	906	604	420	4.6%	4.2%	2.6%	-0.1%	-4.0%	-3.6%
CO <sub>2</sub>	221	367	568	784	787	497	290	5.2%	4.5%	3.3%	0.0%	-4.5%	-5.2%
CH <sub>4</sub>	57	80	115	104	90	82	112	3.5%	3.8%	-1.0%	-1.4%	-0.9%	3.1%
N <sub>2</sub> O	19	23	23	29	29	24	18	1.6%	0.2%	2.3%	-0.1%	-1.7%	-2.9%
F gases	3	2	2	2	1	1	1	-1.5%	-1.6%	-1.2%	-6.0%	0.4%	-0.1%
Total GHG from Energy and Industry	267	433	668	867	854	560	384	5.0%	4.4%	2.6%	-0.2%	-4.1%	-3.7%
CO <sub>2</sub> Emissions from Fuel Comb.	191	332	512	715	708	425	250	5.7%	4.4%	3.4%	-0.1%	-5.0%	-5.1%
Power generation/District heating	36	69	131	188	240	100	46	6.8%	6.6%	3.7%	2.5%	-8.4%	-7.5%
Industry	43	50	98	155	165	147	116	1.4%	6.9%	4.7%	0.6%	-1.2%	-2.3%
Buildings	42	91	121	131	87	43	16	8.1%	2.8%	0.8%	-4.0%	-6.7%	-9.6%
Agriculture	12	11	13	13	13	9	6	-0.8%	1.8%	-0.3%	-0.3%	-3.4%	-3.7%
Transport	39	75	99	146	126	73	28	6.6%	2.9%	3.9%	-1.5%	-5.3%	-9.1%
Other	18	36	50	82	77	52	38	6.9%	3.4%	5.1%	-0.6%	-3.8%	-3.1%
CO <sub>2</sub> captured (CCS)	0	0	0	0	19	153	232	n.s.	n.s.	n.s.	n.s.	22.9%	4.3%
Coal	0	0	0	0	1	10	32	n.s.	n.s.	n.s.	34.3%	35.1%	12.1%
Gas	0	0	0	0	19	141	194	n.s.	n.s.	n.s.	n.s.	22.3%	3.2%
Biomass	0	0	0	0	0	1	6	n.s.	n.s.	n.s.	9.2%	36.9%	20.4%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	184	240	343	442	557	670	1 247	2.7%	3.6%	2.6%	2.3%	1.9%	6.4%
Coal	1	1	1	1	1	2	2	3.5%	-0.6%	2.7%	3.2%	2.0%	0.6%
Oil	161	190	215	227	252	358	968	1.7%	1.2%	0.6%	1.1%	3.6%	10.5%
Natural gas	22	49	126	209	297	297	254	8.5%	9.9%	5.2%	3.6%	0.0%	-1.5%
Biomass	0	0	1	2	3	4	4	-1.8%	16.4%	12.5%	4.8%	2.3%	-1.1%
Nuclear <sup>1</sup>	0	0	0	1	1	2	3	n.s.	n.s.	n.s.	0.0%	1.0%	5.3%
Hydro	1	0	1	1	1	2	2	-5.0%	10.1%	4.4%	1.7%	1.7%	1.0%
Other renewables	0	0	0	0	1	6	15	n.s.	19.8%	8.4%	30.0%	26.3%	9.6%
Net Imports	- 114	- 117	- 135	- 142	- 244	- 400	- 1 004						
Coal	0	1	1	3	7	10	13						
Oil	- 110	- 121	- 132	- 111	- 141	- 285	- 917						
Natural gas	- 4	3	- 4	- 33	- 109	- 126	- 105						
Biomass	0	0	0	0	0	2	5						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	- 1	- 1	- 1	- 1						
Primary Energy Demand <sup>2</sup>	70	124	208	300	313	271	243	5.8%	5.3%	3.7%	0.4%	-1.5%	-1.1%
Coal	1	2	2	4	9	12	15	9.9%	0.8%	5.4%	8.6%	3.6%	2.2%
Oil	51	69	82	116	111	73	51	3.0%	1.8%	3.5%	-0.4%	-4.1%	-3.5%
Natural gas	17	53	122	177	188	171	149	11.7%	8.8%	3.8%	0.6%	-1.0%	-1.3%
Biomass	0	0	1	2	3	6	8	-1.8%	16.4%	9.6%	7.5%	5.7%	4.0%
Nuclear <sup>1</sup>	0	0	0	1	1	2	3	n.s.	n.s.	n.s.	0.0%	1.0%	5.3%
Hydro	1	0	1	1	1	2	2	-5.0%	10.1%	4.4%	1.7%	1.7%	1.0%
Other renewables	0	0	0	0	1	6	15	n.s.	19.8%	8.4%	30.0%	26.3%	9.6%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	70	124	208	300	313	271	243	5.8%	5.3%	3.7%	0.4%	-1.5%	-1.1%
Energy for Power Generation	14	27	52	76	105	107	116	7.2%	6.8%	3.8%	3.3%	0.2%	0.8%
Other Energy Transformation & Losses	6	11	16	30	33	32	33	5.3%	3.9%	6.5%	1.1%	-0.5%	0.3%
Final consumption	54	94	156	221	215	183	159	5.6%	5.2%	3.5%	-0.3%	-1.6%	-1.4%
Steel, Non-Met. Minerals and Chem.	1	3	9	14	16	14	11	17.6%	12.0%	4.4%	1.2%	-1.0%	-2.8%
Other Industry	14	16	30	47	51	50	50	1.7%	6.4%	4.6%	0.9%	-0.2%	-0.1%
Non-Energy Use	6	8	14	24	28	30	28	1.9%	6.0%	5.8%	1.7%	0.4%	-0.4%
Residential	12	29	46	57	44	27	20	9.0%	4.7%	2.1%	-2.7%	-4.6%	-3.0%
Services	4	9	11	13	13	10	10	7.4%	2.4%	1.3%	-0.2%	-1.9%	-0.4%
Agriculture	4	4	6	8	10	12	13	0.4%	4.0%	2.2%	1.9%	1.9%	1.5%
Road	13	24	39	57	53	39	26	6.3%	5.0%	3.9%	-0.7%	-3.1%	-3.9%
Rail	0	0	0	0	0	0	0	n.s.	36.8%	6.1%	3.1%	2.8%	1.9%
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other Transport	0	1	0	0	0	0	0	n.s.	-30.1%	2.3%	-1.1%	-2.1%	-2.3%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Iran	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>13</b>	<b>27</b>	<b>51</b>	<b>73</b>	<b>101</b>	<b>97</b>	<b>96</b>	<b>7.5%</b>	<b>6.7%</b>	<b>3.6%</b>	<b>3.4%</b>	<b>-0.4%</b>	<b>-0.1%</b>
Coal	0	0	0	1	1	2	3	22.3%	-3.1%	18.2%	6.1%	7.7%	4.0%
Oil	6	7	13	21	21	7	5	1.5%	6.1%	4.7%	0.3%	-11.2%	-2.2%
Gas	7	19	38	51	78	88	87	11.2%	7.0%	3.1%	4.3%	1.1%	-0.1%
Biomass & Waste	0	0	0	0	0	1	1	n.s.	n.s.	10.0%	45.9%	9.0%	4.6%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>59</b>	<b>121</b>	<b>233</b>	<b>364</b>	<b>543</b>	<b>634</b>	<b>743</b>	<b>7.5%</b>	<b>6.7%</b>	<b>4.6%</b>	<b>4.1%</b>	<b>1.6%</b>	<b>1.6%</b>
Coal	0	0	0	2	5	10	16	22.2%	-3.1%	19.2%	8.7%	8.1%	4.3%
of which CCS	0	0	0	0	1	7	14	n.s.	n.s.	n.s.	n.s.	27.8%	7.6%
Oil	22	25	46	87	91	28	23	1.5%	6.1%	6.5%	0.5%	-11.0%	-2.1%
Gas	31	92	177	255	416	518	529	11.5%	6.8%	3.7%	5.0%	2.2%	0.2%
of which CCS	0	0	0	0	43	353	479	n.s.	n.s.	n.s.	n.s.	23.6%	3.1%
Biomass & Waste	0	0	0	0	2	4	6	n.s.	n.s.	11.6%	48.7%	9.2%	4.9%
of which CCS	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	n.s.	12.2%
Nuclear	0	0	0	6	6	6	11	n.s.	n.s.	n.s.	0.0%	1.0%	5.4%
Hydro	6	4	10	15	17	21	23	-5.0%	10.1%	4.4%	1.7%	1.7%	1.0%
Wind	0	0	0	0	5	21	53	n.s.	18.5%	6.2%	29.3%	15.7%	9.8%
Solar	0	0	0	0	2	26	81	n.s.	n.s.	19.8%	30.6%	29.3%	12.0%
Other	0	0	0	0	0	0	3	n.s.	n.s.	n.s.	n.s.	34.3%	28.9%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>18</b>	<b>34</b>	<b>61</b>	<b>79</b>	<b>112</b>	<b>148</b>	<b>187</b>	<b>6.5%</b>	<b>6.2%</b>	<b>2.6%</b>	<b>3.5%</b>	<b>2.8%</b>	<b>2.4%</b>
Coal	0	0	0	0	1	1	2	22.2%	-3.2%	2.6%	8.8%	7.7%	4.5%
of which CCS	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	27.4%	7.8%
Oil	6	8	13	16	20	20	13	3.5%	4.1%	2.6%	2.1%	-0.2%	-4.2%
Gas	10	23	40	51	74	86	82	8.6%	5.8%	2.4%	3.9%	1.5%	-0.4%
of which CCS	0	0	0	0	5	44	63	n.s.	n.s.	n.s.	n.s.	23.5%	3.6%
Biomass & Waste	0	0	0	0	0	1	1	n.s.	n.s.	-2.4%	48.9%	8.8%	5.0%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	12.3%
Nuclear	0	0	0	1	1	1	2	n.s.	n.s.	n.s.	-0.2%	0.8%	5.2%
Hydro	2	2	8	11	13	15	17	0.2%	15.6%	2.4%	1.7%	1.7%	1.0%
Wind	0	0	0	0	2	8	21	n.s.	n.s.	5.6%	28.4%	15.5%	9.6%
Solar	0	0	0	0	1	16	49	n.s.	n.s.	19.6%	30.3%	29.5%	12.0%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	33.7%	28.3%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>54</b>	<b>94</b>	<b>156</b>	<b>221</b>	<b>215</b>	<b>183</b>	<b>159</b>	<b>5.6%</b>	<b>5.2%</b>	<b>3.5%</b>	<b>-0.3%</b>	<b>-1.6%</b>	<b>-1.4%</b>
Coal	0	1	1	1	4	5	8	7.4%	-0.8%	6.5%	9.7%	3.5%	4.1%
Oil	40	56	63	82	77	60	42	3.3%	1.3%	2.6%	-0.5%	-2.6%	-3.5%
Gas	9	29	75	108	91	64	42	12.0%	10.0%	3.7%	-1.7%	-3.4%	-4.2%
Electricity	4	8	16	26	39	46	54	6.7%	7.0%	5.0%	4.1%	1.6%	1.7%
Heat	0	0	0	0	0	2	4	n.s.	n.s.	n.s.	n.s.	n.s.	6.2%
Biomass & Other	0	0	1	4	4	6	9	-1.8%	16.3%	19.8%	0.9%	3.7%	4.8%
Share of Renewables <sup>3</sup> (%)	1%	1%	1%	1%	2%	9%	21%	-9.6%	6.9%	2.8%	6.5%	13.8%	9.1%
<b>Industry (incl. non-energy use)</b>	<b>21</b>	<b>27</b>	<b>53</b>	<b>85</b>	<b>95</b>	<b>94</b>	<b>89</b>	<b>2.7%</b>	<b>7.1%</b>	<b>4.9%</b>	<b>1.1%</b>	<b>-0.1%</b>	<b>-0.6%</b>
Coal	0	1	1	1	4	5	8	7.2%	-0.7%	6.6%	9.8%	3.5%	4.1%
Oil	12	12	16	18	23	28	29	0.3%	2.6%	1.1%	2.7%	1.9%	0.2%
Gas	7	11	31	57	56	47	36	4.6%	11.2%	6.4%	-0.1%	-1.8%	-2.7%
Electricity	1	3	5	9	12	14	16	8.6%	6.7%	5.2%	3.1%	1.2%	1.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	0	n.s.	n.s.	n.s.	4.5%	1.2%	-4.5%
<b>Buildings</b>	<b>17</b>	<b>38</b>	<b>58</b>	<b>70</b>	<b>56</b>	<b>38</b>	<b>30</b>	<b>8.6%</b>	<b>4.2%</b>	<b>2.0%</b>	<b>-2.2%</b>	<b>-3.9%</b>	<b>-2.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	-7.3%	-1.5%	-7.7%	n.s.	n.s.
Oil	11	15	9	7	5	4	2	3.0%	-5.1%	-2.1%	-3.6%	-2.9%	-8.0%
Gas	3	19	40	46	30	13	5	21.7%	7.9%	1.6%	-4.1%	-7.8%	-10.3%
Electricity	3	5	8	13	18	17	20	5.3%	6.5%	4.5%	3.3%	-0.6%	1.3%
Heat	0	0	0	0	0	2	4	n.s.	n.s.	n.s.	n.s.	n.s.	6.2%
Biomass & Other	0	0	1	3	2	1	0	-1.8%	16.3%	18.6%	-3.3%	-8.5%	-10.5%
<b>Agriculture</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>12</b>	<b>13</b>	<b>0.4%</b>	<b>4.0%</b>	<b>2.2%</b>	<b>1.9%</b>	<b>1.9%</b>	<b>1.5%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	4	4	4	3	3	2	2	-0.8%	1.1%	-1.1%	-0.4%	-3.7%	-4.0%
Gas	0	0	0	1	1	1	1	n.s.	n.s.	7.1%	0.1%	-2.2%	-2.5%
Electricity	0	1	2	4	5	7	9	9.4%	10.2%	5.8%	3.4%	3.4%	2.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	54.2%	15.7%	4.5%
<b>Transport</b>	<b>13</b>	<b>25</b>	<b>39</b>	<b>57</b>	<b>54</b>	<b>39</b>	<b>26</b>	<b>6.6%</b>	<b>4.8%</b>	<b>3.9%</b>	<b>-0.7%</b>	<b>-3.0%</b>	<b>-3.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	13	25	34	53	46	25	10	6.6%	3.4%	4.4%	-1.5%	-5.7%	-9.1%
Gas	0	0	5	4	4	3	1	n.s.	n.s.	-1.1%	-0.9%	-0.9%	-9.0%
Electricity	0	0	0	0	3	8	9	n.s.	36.8%	20.7%	34.7%	8.7%	1.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	3	6	n.s.	n.s.	n.s.	29.1%	12.7%	8.3%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>6</b>	<b>11</b>	<b>16</b>	<b>30</b>	<b>33</b>	<b>32</b>	<b>33</b>	<b>5.3%</b>	<b>3.9%</b>	<b>6.5%</b>	<b>1.1%</b>	<b>-0.5%</b>	<b>0.3%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

<b>Saudi Arabia</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	16	21	28	34	39	43	46	2.7%	2.8%	2.0%	1.3%	1.0%	0.7%
GDP per capita (ppp, k\$'05)	19	19	24	27	31	37	41	0.0%	2.5%	1.2%	1.4%	1.7%	1.1%
GDP per capita (mer, k\$'05)	12	12	15	17	20	24	26	0.0%	2.3%	1.4%	1.4%	1.7%	1.1%
Share Value Added - Agriculture (%)	9	6	1	1	1	1	1	-5.1%	-15.7%	-5.4%	-0.2%	-0.2%	-0.1%
Share Value Added - Industry (%)	42	49	50	50	48	46	44	1.5%	0.1%	0.2%	-0.4%	-0.6%	-0.4%
Share Value Added - Services (%)	48	45	49	49	51	54	56	-0.7%	0.9%	-0.1%	0.4%	0.5%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	18	21	26	-7.8%	10.3%	-2.2%	1.3%	1.2%	2.4%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	28	24	47	43	46	38	32	-1.2%	6.8%	-0.9%	0.8%	-2.0%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
<b>Total GHG</b>	<b>213</b>	<b>324</b>	<b>551</b>	<b>697</b>	<b>616</b>	<b>413</b>	<b>223</b>	<b>4.3%</b>	<b>5.5%</b>	<b>2.4%</b>	<b>-1.2%</b>	<b>-3.9%</b>	<b>-6.0%</b>
<b>Total GHG (excl. sinks)</b>	<b>213</b>	<b>324</b>	<b>551</b>	<b>697</b>	<b>617</b>	<b>415</b>	<b>225</b>	<b>4.3%</b>	<b>5.5%</b>	<b>2.4%</b>	<b>-1.2%</b>	<b>-3.9%</b>	<b>-5.9%</b>
<b>Total GHG (energy, industry, agriculture)</b>	<b>213</b>	<b>324</b>	<b>551</b>	<b>697</b>	<b>617</b>	<b>415</b>	<b>225</b>	<b>4.3%</b>	<b>5.5%</b>	<b>2.4%</b>	<b>-1.2%</b>	<b>-3.9%</b>	<b>-5.9%</b>
CO <sub>2</sub>	174	274	483	622	558	358	216	4.7%	5.8%	2.6%	-1.1%	-4.3%	-5.0%
CH <sub>4</sub>	31	43	60	67	53	51	5	3.5%	3.4%	1.0%	-2.3%	-0.4%	-20.8%
N <sub>2</sub> O	6	6	8	9	6	5	4	0.2%	1.6%	1.5%	-3.3%	-2.3%	-2.6%
F gases	2	0	0	0	0	0	0	-26.3%	11.7%	-1.4%	-6.9%	-1.1%	-0.1%
<b>Total GHG from Energy and Industry</b>	<b>208</b>	<b>319</b>	<b>547</b>	<b>692</b>	<b>612</b>	<b>410</b>	<b>221</b>	<b>4.4%</b>	<b>5.5%</b>	<b>2.4%</b>	<b>-1.2%</b>	<b>-3.9%</b>	<b>-6.0%</b>
<b>CO<sub>2</sub> Emissions from Fuel Comb.</b>	<b>158</b>	<b>248</b>	<b>434</b>	<b>554</b>	<b>483</b>	<b>294</b>	<b>183</b>	<b>4.6%</b>	<b>5.8%</b>	<b>2.5%</b>	<b>-1.4%</b>	<b>-4.9%</b>	<b>-4.6%</b>
Power generation/District heating	58	103	180	211	186	75	40	5.9%	5.7%	1.6%	-1.3%	-8.7%	-6.0%
Industry	30	57	113	153	139	115	88	6.7%	7.2%	3.1%	-1.0%	-1.9%	-2.7%
Buildings	3	4	5	7	10	8	3	2.9%	2.0%	5.0%	3.4%	-2.6%	-9.0%
Agriculture	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Transport	49	61	107	152	122	75	36	2.1%	5.8%	3.6%	-2.2%	-4.8%	-7.1%
Other	18	23	30	29	27	21	16	2.5%	2.4%	-0.2%	-0.9%	-2.1%	-2.8%
<b>CO<sub>2</sub> captured (CCS)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>81</b>	<b>120</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>25.4%</b>	<b>4.0%</b>
Coal	0	0	0	0	0	6	14	n.s.	n.s.	n.s.	n.s.	31.1%	8.8%
Gas	0	0	0	0	8	75	102	n.s.	n.s.	n.s.	n.s.	25.0%	3.2%
Biomass	0	0	0	0	0	0	3	n.s.	n.s.	n.s.	n.s.	20.5%	29.3%
<b>Energy Balance, by fuel (Mtoe)</b>													
<b>Primary Production</b>	<b>378</b>	<b>508</b>	<b>570</b>	<b>841</b>	<b>905</b>	<b>1 095</b>	<b>146</b>	<b>3.0%</b>	<b>1.1%</b>	<b>4.0%</b>	<b>0.7%</b>	<b>1.9%</b>	<b>-18.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	350	467	497	741	759	936	0	2.9%	0.6%	4.1%	0.2%	2.1%	n.s.
Natural gas	28	41	73	99	145	152	135	4.0%	5.9%	3.1%	3.9%	0.5%	-1.2%
Biomass	0	0	0	1	1	2	2	-9.3%	2.9%	58.5%	5.8%	5.6%	0.6%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	14.6%
Hydro	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other renewables	0	0	0	0	1	5	9	n.s.	n.s.	n.s.	39.1%	24.3%	6.6%
<b>Net Imports</b>	<b>- 316</b>	<b>- 409</b>	<b>- 383</b>	<b>- 602</b>	<b>- 684</b>	<b>- 904</b>	<b>23</b>						
Coal	0	0	0	0	1	3	5						
Oil	- 308	- 399	- 370	- 600	- 640	- 854	67						
Natural gas	- 8	- 10	- 13	- 2	- 44	- 53	- 52						
Biomass	0	0	0	0	0	0	2						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	0	0	0	0	0	0						
<b>Primary Energy Demand<sup>2</sup></b>	<b>62</b>	<b>99</b>	<b>187</b>	<b>239</b>	<b>222</b>	<b>191</b>	<b>169</b>	<b>4.8%</b>	<b>6.5%</b>	<b>2.5%</b>	<b>-0.7%</b>	<b>-1.5%</b>	<b>-1.3%</b>
Coal	0	0	0	0	1	3	5	n.s.	n.s.	n.s.	13.1%	8.6%	5.3%
Oil	43	68	127	141	118	82	67	4.8%	6.4%	1.1%	-1.8%	-3.6%	-2.0%
Natural gas	19	31	60	97	101	99	83	4.7%	6.9%	4.9%	0.4%	-0.1%	-1.8%
Biomass	0	0	0	1	1	2	4	-9.5%	2.9%	56.0%	6.9%	7.4%	6.7%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	14.6%
Hydro	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other renewables	0	0	0	0	1	5	9	n.s.	n.s.	n.s.	39.1%	24.3%	6.6%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
<b>Primary Energy Demand</b>	<b>62</b>	<b>99</b>	<b>187</b>	<b>239</b>	<b>222</b>	<b>191</b>	<b>169</b>	<b>4.8%</b>	<b>6.5%</b>	<b>2.5%</b>	<b>-0.7%</b>	<b>-1.5%</b>	<b>-1.3%</b>
<b>Energy for Power Generation</b>	<b>22</b>	<b>37</b>	<b>65</b>	<b>81</b>	<b>76</b>	<b>67</b>	<b>68</b>	<b>5.6%</b>	<b>5.7%</b>	<b>2.2%</b>	<b>-0.6%</b>	<b>-1.2%</b>	<b>0.1%</b>
<b>Other Energy Transformation &amp; Losses</b>	<b>6</b>	<b>7</b>	<b>20</b>	<b>15</b>	<b>15</b>	<b>16</b>	<b>19</b>	<b>1.8%</b>	<b>10.5%</b>	<b>-2.4%</b>	<b>-0.1%</b>	<b>0.3%</b>	<b>1.8%</b>
<b>Final consumption</b>	<b>39</b>	<b>63</b>	<b>120</b>	<b>167</b>	<b>157</b>	<b>140</b>	<b>119</b>	<b>4.9%</b>	<b>6.6%</b>	<b>3.4%</b>	<b>-0.6%</b>	<b>-1.1%</b>	<b>-1.6%</b>
Steel, Non-Met. Minerals and Chem.	0	0	1	2	2	2	2	n.s.	n.s.	3.8%	0.4%	-0.1%	-0.2%
Other Industry	6	11	19	28	27	26	23	6.6%	5.8%	3.7%	-0.1%	-0.4%	-1.2%
Non-Energy Use	12	23	48	65	62	57	48	6.6%	7.4%	3.0%	-0.5%	-0.8%	-1.6%
Residential	3	6	11	14	14	14	14	5.9%	6.0%	2.8%	0.1%	0.0%	-0.1%
Services	1	2	5	8	9	9	10	5.3%	8.2%	4.1%	1.1%	0.6%	0.1%
Agriculture	0	0	0	0	1	1	1	9.2%	4.8%	3.2%	2.1%	2.0%	1.7%
Road	16	19	34	49	42	30	20	2.2%	5.8%	3.7%	-1.6%	-3.2%	-3.8%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Aviation	1	1	1	1	1	0	0	2.0%	1.0%	2.5%	-4.7%	-5.4%	-4.8%
Other Transport	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Saudi Arabia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>22</b>	<b>37</b>	<b>65</b>	<b>81</b>	<b>75</b>	<b>63</b>	<b>59</b>	<b>5.6%</b>	<b>5.7%</b>	<b>2.2%</b>	<b>-0.7%</b>	<b>-1.8%</b>	<b>-0.5%</b>
Coal	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	12.8%	9.7%	4.1%
Oil	9	19	35	28	20	4	5	7.7%	6.0%	-2.3%	-3.0%	-15.8%	2.4%
Gas	12	18	30	53	54	57	52	3.7%	5.3%	5.8%	0.2%	0.6%	-1.0%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	14.9%	3.0%	0.7%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>69</b>	<b>126</b>	<b>240</b>	<b>350</b>	<b>360</b>	<b>392</b>	<b>425</b>	<b>6.2%</b>	<b>6.6%</b>	<b>3.8%</b>	<b>0.3%</b>	<b>0.9%</b>	<b>0.8%</b>
Coal	0	0	0	1	4	9	13	n.s.	n.s.	n.s.	12.9%	9.3%	4.2%
of which CCS	0	0	0	0	0	6	12	n.s.	n.s.	n.s.	n.s.	29.0%	7.0%
Oil	34	68	129	113	85	16	20	7.2%	6.6%	-1.3%	-2.8%	-15.5%	2.3%
Gas	35	58	111	235	266	327	310	5.1%	6.7%	7.8%	1.2%	2.1%	-0.6%
of which CCS	0	0	0	0	22	199	269	n.s.	n.s.	n.s.	n.s.	24.7%	3.0%
Biomass & Waste	0	0	0	0	1	1	1	n.s.	n.s.	n.s.	16.0%	3.2%	1.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	11.9%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Wind	0	0	0	0	3	12	29	n.s.	n.s.	n.s.	31.5%	17.2%	9.0%
Solar	0	0	0	0	2	27	51	n.s.	n.s.	n.s.	45.2%	27.6%	6.5%
Other	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	25.4%	40.9%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>24</b>	<b>31</b>	<b>60</b>	<b>85</b>	<b>81</b>	<b>102</b>	<b>111</b>	<b>2.6%</b>	<b>6.8%</b>	<b>3.6%</b>	<b>-0.4%</b>	<b>2.3%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	13.1%	9.0%	4.3%
of which CCS	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	28.7%	7.2%
Oil	13	18	33	39	30	22	18	3.2%	6.4%	1.7%	-2.6%	-3.2%	-1.6%
Gas	11	13	27	46	49	58	49	1.9%	7.2%	5.4%	0.6%	1.8%	-1.8%
of which CCS	0	0	0	0	3	25	35	n.s.	n.s.	n.s.	n.s.	24.6%	3.4%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	16.1%	2.9%	1.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	12.0%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	1.6%	1.3%
Wind	0	0	0	0	1	5	12	n.s.	n.s.	n.s.	31.3%	17.0%	8.9%
Solar	0	0	0	0	1	16	30	n.s.	n.s.	n.s.	45.4%	27.7%	6.4%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	40.2%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>39</b>	<b>63</b>	<b>120</b>	<b>167</b>	<b>157</b>	<b>140</b>	<b>119</b>	<b>4.9%</b>	<b>6.6%</b>	<b>3.4%</b>	<b>-0.6%</b>	<b>-1.1%</b>	<b>-1.6%</b>
Coal	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	13.2%	6.7%	7.8%
Oil	28	43	75	102	88	70	55	4.3%	5.7%	3.2%	-1.6%	-2.2%	-2.4%
Gas	6	12	27	40	43	37	25	6.4%	9.0%	3.8%	0.6%	-1.3%	-3.7%
Electricity	5	9	17	24	26	29	31	6.1%	7.4%	3.2%	0.7%	1.2%	0.8%
Heat	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	28.2%	3.8%
Biomass & Other	0	0	0	0	1	2	4	-9.6%	2.9%	53.7%	5.1%	9.0%	8.6%
Share of Renewables <sup>3</sup> (%)	0%	0%	0%	0%	1%	8%	20%	n.s.	n.s.	n.s.	11.1%	21.5%	9.8%
<b>Industry (incl. non-energy use)</b>	<b>18</b>	<b>34</b>	<b>69</b>	<b>94</b>	<b>91</b>	<b>85</b>	<b>74</b>	<b>6.6%</b>	<b>7.2%</b>	<b>3.2%</b>	<b>-0.4%</b>	<b>-0.7%</b>	<b>-1.4%</b>
Coal	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	13.2%	6.7%	7.8%
Oil	11	22	39	51	48	46	43	6.9%	6.0%	2.8%	-0.7%	-0.4%	-0.6%
Gas	6	12	27	39	38	34	24	6.4%	9.0%	3.6%	-0.2%	-1.3%	-3.3%
Electricity	1	1	2	4	4	5	5	4.2%	8.7%	4.6%	1.1%	0.5%	0.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-2.6%	-6.9%	-5.2%
<b>Buildings</b>	<b>5</b>	<b>8</b>	<b>16</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>24</b>	<b>5.7%</b>	<b>6.7%</b>	<b>3.3%</b>	<b>0.5%</b>	<b>0.2%</b>	<b>0.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	1	2	1	1	0	2.9%	2.0%	1.6%	-2.3%	-4.1%	-8.6%
Gas	0	0	0	1	3	2	1	n.s.	n.s.	n.s.	11.5%	-1.7%	-9.2%
Electricity	4	7	15	20	19	19	21	6.3%	7.3%	2.9%	-0.3%	0.2%	0.7%
Heat	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	28.2%	3.8%
Biomass & Other	0	0	0	0	0	0	0	-9.6%	2.9%	37.2%	3.9%	-4.0%	-9.7%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>9.2%</b>	<b>4.8%</b>	<b>3.2%</b>	<b>2.1%</b>	<b>2.0%</b>	<b>1.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	1	1	1	9.2%	4.8%	3.2%	2.1%	2.0%	1.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	<b>16</b>	<b>20</b>	<b>35</b>	<b>50</b>	<b>42</b>	<b>30</b>	<b>21</b>	<b>2.2%</b>	<b>5.6%</b>	<b>3.7%</b>	<b>-1.6%</b>	<b>-3.2%</b>	<b>-3.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	16	20	35	49	38	23	11	2.2%	5.6%	3.6%	-2.5%	-4.9%	-7.0%
Gas	0	0	0	0	2	2	1	n.s.	n.s.	n.s.	26.6%	-1.0%	-9.0%
Electricity	0	0	0	0	2	4	5	n.s.	n.s.	n.s.	42.9%	9.3%	1.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	4	n.s.	n.s.	n.s.	38.9%	17.3%	9.9%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>6</b>	<b>7</b>	<b>20</b>	<b>15</b>	<b>15</b>	<b>16</b>	<b>19</b>	<b>1.8%</b>	<b>10.5%</b>	<b>-2.4%</b>	<b>-0.1%</b>	<b>0.3%</b>	<b>1.8%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Turkey	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	54	63	72	82	88	93	96	1.6%	1.3%	1.3%	0.6%	0.6%	0.3%
GDP per capita (ppp, k\$'05)	8	10	13	16	21	27	31	2.0%	2.5%	2.5%	2.8%	2.2%	1.6%
GDP per capita (mer, k\$'05)	5	6	8	10	13	17	19	2.0%	2.5%	2.6%	2.8%	2.2%	1.6%
Share Value Added - Agriculture (%)	18	11	10	9	8	8	7	-4.6%	-1.6%	-1.2%	-0.7%	-0.5%	-0.3%
Share Value Added - Industry (%)	32	31	27	26	25	24	23	-0.2%	-1.5%	-0.2%	-0.5%	-0.5%	-0.4%
Share Value Added - Services (%)	50	57	63	65	67	69	70	1.4%	1.0%	0.3%	0.3%	0.2%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	18	9	19	12	14	18	23	-6.5%	7.4%	-4.3%	1.5%	2.3%	2.9%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	18	21	30	38	49	38	33	1.4%	3.8%	2.3%	2.5%	-2.4%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	141	242	315	424	367	201	3	5.6%	2.7%	3.0%	-1.4%	-5.9%	-33.9%
Total GHG (excl. sinks)	185	292	373	470	454	286	94	4.7%	2.5%	2.3%	-0.3%	-4.5%	-10.5%
Total GHG (energy, industry, agriculture)	185	292	373	470	454	286	94	4.7%	2.5%	2.3%	-0.3%	-4.5%	-10.5%
CO <sub>2</sub>	138	220	297	386	393	248	76	4.8%	3.1%	2.7%	0.2%	-4.5%	-11.2%
CH <sub>4</sub>	34	53	57	62	45	24	10	4.7%	0.7%	0.9%	-3.3%	-5.9%	-8.9%
N <sub>2</sub> O	12	17	14	17	15	11	7	3.4%	-1.9%	1.5%	-1.2%	-2.5%	-4.9%
F gases	1	2	5	5	2	2	2	10.6%	11.4%	0.0%	-8.9%	-0.5%	0.4%
Total GHG from Energy and Industry	155	265	346	435	424	262	80	5.5%	2.7%	2.3%	-0.3%	-4.7%	-11.2%
CO <sub>2</sub> Emissions from Fuel Comb.	122	199	260	339	338	196	49	5.0%	2.7%	2.7%	0.0%	-5.3%	-13.0%
Power generation/District heating	31	68	96	133	143	49	-32	8.1%	3.6%	3.2%	0.7%	-10.1%	n.s.
Industry	30	54	48	51	54	44	27	6.2%	-1.1%	0.6%	0.6%	-2.1%	-4.9%
Buildings	23	27	49	47	34	16	6	1.6%	6.2%	-0.4%	-3.2%	-7.1%	-9.1%
Agriculture	6	8	14	12	12	8	5	3.4%	5.4%	-1.2%	-0.5%	-3.8%	-4.1%
Transport	26	34	43	82	81	67	38	2.6%	2.3%	6.6%	-0.1%	-1.8%	-5.7%
Other	6	8	10	14	15	11	4	2.8%	2.3%	3.8%	0.4%	-2.7%	-8.9%
CO <sub>2</sub> captured (CCS)	0	0	0	0	7	77	136	n.s.	n.s.	n.s.	n.s.	26.5%	5.8%
Coal	0	0	0	0	7	47	46	n.s.	n.s.	n.s.	n.s.	21.4%	-0.1%
Gas	0	0	0	0	1	13	19	n.s.	n.s.	n.s.	n.s.	35.2%	4.1%
Biomass	0	0	0	0	0	18	71	n.s.	n.s.	n.s.	n.s.	n.s.	14.8%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	25	27	32	52	65	87	96	0.9%	1.8%	4.9%	2.2%	3.0%	1.0%
Coal	12	15	19	18	15	10	8	2.0%	2.8%	-0.6%	-2.1%	-3.7%	-2.8%
Oil	4	3	2	2	3	3	0	-2.8%	-1.0%	-1.4%	2.1%	-0.4%	n.s.
Natural gas	0	1	1	1	2	4	5	11.6%	0.7%	5.5%	9.1%	5.6%	1.8%
Biomass	7	7	5	15	18	28	33	-1.0%	-3.5%	12.8%	1.7%	4.5%	1.5%
Nuclear <sup>1</sup>	0	0	0	0	1	4	6	n.s.	n.s.	n.s.	30.4%	12.8%	3.7%
Hydro	2	3	4	6	7	8	9	2.9%	5.3%	2.5%	2.6%	1.3%	1.0%
Other renewables	0	0	1	10	19	30	36	13.1%	14.3%	23.2%	6.5%	4.7%	1.9%
Net Imports	26	51	72	87	95	80	65						
Coal	4	10	14	28	29	21	14						
Oil	19	28	28	36	36	29	19						
Natural gas	3	12	31	30	37	34	27						
Biomass	0	0	0	-7	-7	-5	3						
Biofuels	0	0	0	0	0	1	1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	51	78	105	140	160	167	161	4.3%	3.0%	2.9%	1.4%	0.4%	-0.4%
Coal	16	24	33	47	43	31	21	4.4%	3.0%	3.5%	-0.7%	-3.2%	-3.7%
Oil	23	31	30	38	38	32	19	3.0%	-0.3%	2.3%	0.1%	-1.9%	-5.1%
Natural gas	3	13	31	31	40	38	31	16.0%	9.5%	-0.1%	2.5%	-0.5%	-1.9%
Biomass	7	7	5	8	11	23	36	-1.0%	-3.5%	5.7%	3.0%	8.0%	4.7%
Nuclear <sup>1</sup>	0	0	0	0	1	4	6	n.s.	n.s.	n.s.	30.4%	12.8%	3.7%
Hydro	2	3	4	6	7	8	9	2.9%	5.3%	2.5%	2.6%	1.3%	1.0%
Other renewables	0	0	1	10	19	30	36	13.1%	14.3%	23.2%	6.5%	4.7%	1.9%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	51	78	105	140	160	167	161	4.3%	3.0%	2.9%	1.4%	0.4%	-0.4%
Energy for Power Generation	11	24	37	55	76	90	103	7.9%	4.6%	3.9%	3.3%	1.7%	1.3%
Other Energy Transformation & Losses	3	5	5	9	11	12	13	4.0%	0.5%	6.6%	1.3%	1.4%	0.7%
Final consumption	41	59	80	100	110	114	104	3.7%	3.1%	2.3%	1.0%	0.3%	-0.9%
Steel, Non-Met. Minerals and Chem.	5	6	9	15	17	20	19	2.1%	4.6%	5.1%	1.0%	1.9%	-0.6%
Other Industry	7	15	15	15	18	19	19	8.1%	0.3%	0.0%	1.7%	0.6%	0.0%
Non-Energy Use	3	4	7	7	8	8	6	2.3%	7.3%	-0.5%	1.6%	-0.1%	-2.4%
Residential	15	18	23	22	22	19	16	1.8%	2.7%	-0.3%	-0.3%	-1.1%	-1.9%
Services	1	2	6	11	13	13	14	13.4%	9.7%	7.0%	1.1%	0.5%	0.7%
Agriculture	2	3	5	4	5	6	6	4.1%	5.5%	-1.1%	1.4%	1.0%	0.7%
Road	8	11	13	23	26	26	21	2.3%	2.4%	5.6%	1.2%	0.0%	-2.0%
Rail	0	0	0	0	0	0	0	0.4%	-3.6%	1.8%	1.1%	0.6%	0.2%
Aviation	0	1	0	1	1	1	1	9.5%	-5.7%	2.7%	3.3%	1.4%	-1.2%
Other Transport	0	0	1	1	1	1	1	-2.6%	11.9%	2.8%	1.7%	-1.5%	-2.8%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Turkey	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>9</b>	<b>21</b>	<b>32</b>	<b>39</b>	<b>49</b>	<b>48</b>	<b>52</b>	<b>8.7%</b>	<b>4.3%</b>	<b>2.2%</b>	<b>2.2%</b>	<b>-0.2%</b>	<b>0.8%</b>
Coal	6	11	14	26	24	17	11	6.4%	2.6%	6.6%	-0.8%	-3.3%	-4.2%
Oil	1	3	1	1	2	2	1	8.9%	-14.3%	3.6%	10.0%	1.7%	-5.0%
Gas	2	7	17	11	20	19	18	13.3%	8.7%	-4.0%	5.8%	-0.8%	-0.5%
Biomass & Waste	0	0	0	0	2	9	20	n.s.	7.3%	14.3%	13.9%	18.1%	8.9%
Other	0	0	0	0	1	1	1	-0.5%	24.3%	23.5%	5.2%	0.3%	0.1%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>58</b>	<b>125</b>	<b>211</b>	<b>305</b>	<b>436</b>	<b>560</b>	<b>673</b>	<b>8.1%</b>	<b>5.4%</b>	<b>3.7%</b>	<b>3.6%</b>	<b>2.5%</b>	<b>1.9%</b>
Coal	20	38	55	110	108	80	53	6.6%	3.7%	7.2%	-0.2%	-3.0%	-4.0%
of which CCS	0	0	0	0	7	49	47	n.s.	n.s.	n.s.	n.s.	21.8%	-0.4%
Oil	4	9	2	3	9	11	7	9.0%	-13.5%	4.6%	10.1%	1.8%	-4.8%
Gas	10	46	98	67	117	105	106	16.3%	7.8%	-3.7%	5.7%	-1.1%	0.1%
of which CCS	0	0	0	0	2	34	52	n.s.	n.s.	n.s.	n.s.	35.6%	4.2%
Biomass & Waste	0	0	0	2	7	41	101	n.s.	7.6%	14.7%	15.1%	18.8%	9.4%
of which CCS	0	0	0	0	0	20	80	n.s.	n.s.	n.s.	n.s.	n.s.	14.8%
Nuclear	0	0	0	0	5	17	24	n.s.	n.s.	n.s.	30.8%	12.8%	3.3%
Hydro	23	31	52	66	85	97	107	2.9%	5.3%	2.5%	2.6%	1.3%	1.0%
Wind	0	0	3	46	75	137	164	n.s.	56.4%	31.9%	5.0%	6.2%	1.8%
Solar	0	0	0	5	20	61	97	n.s.	n.s.	n.s.	15.6%	12.1%	4.7%
Other	0	0	1	6	9	10	14	-0.5%	24.3%	23.5%	5.3%	1.0%	3.4%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>17</b>	<b>27</b>	<b>49</b>	<b>107</b>	<b>151</b>	<b>210</b>	<b>252</b>	<b>5.0%</b>	<b>6.1%</b>	<b>8.1%</b>	<b>3.4%</b>	<b>3.4%</b>	<b>1.8%</b>
Coal	6	7	12	19	25	20	11	2.9%	5.1%	4.7%	2.7%	-2.2%	-5.7%
of which CCS	0	0	0	0	1	7	9	n.s.	n.s.	n.s.	n.s.	22.6%	2.0%
Oil	2	2	2	2	3	4	5	-2.7%	-0.4%	2.8%	4.1%	2.9%	1.6%
Gas	2	7	18	32	37	35	38	12.3%	10.0%	5.9%	1.4%	-0.6%	0.8%
of which CCS	0	0	0	0	0	5	9	n.s.	n.s.	n.s.	n.s.	37.7%	6.3%
Biomass & Waste	0	0	0	0	1	6	15	n.s.	11.5%	9.7%	14.3%	18.7%	9.9%
of which CCS	0	0	0	0	0	3	11	n.s.	n.s.	n.s.	n.s.	n.s.	15.7%
Nuclear	0	0	0	0	1	3	4	n.s.	n.s.	n.s.	30.6%	12.6%	3.1%
Hydro	7	11	16	29	37	42	46	5.1%	3.5%	6.4%	2.3%	1.3%	1.0%
Wind	0	0	1	20	32	59	68	n.s.	53.0%	31.4%	4.7%	6.2%	1.5%
Solar	0	0	0	3	13	40	63	n.s.	n.s.	n.s.	15.8%	12.0%	4.6%
Other	0	0	0	1	1	2	2	0.0%	20.2%	22.0%	5.6%	2.5%	3.1%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>41</b>	<b>59</b>	<b>80</b>	<b>100</b>	<b>110</b>	<b>114</b>	<b>104</b>	<b>3.7%</b>	<b>3.1%</b>	<b>2.3%</b>	<b>1.0%</b>	<b>0.3%</b>	<b>-0.9%</b>
Coal	9	12	17	14	13	7	4	3.5%	3.3%	-1.7%	-1.0%	-5.2%	-5.7%
Oil	20	26	28	36	35	29	17	2.5%	0.8%	2.4%	-0.2%	-2.1%	-4.9%
Gas	1	5	13	19	18	18	12	21.0%	10.3%	3.6%	-0.2%	-0.2%	-3.7%
Electricity	4	8	15	21	31	40	48	7.9%	5.9%	3.9%	3.7%	2.6%	1.8%
Heat	0	1	3	3	5	7	7	12.4%	9.2%	0.0%	4.9%	2.9%	0.7%
Biomass & Other	7	6	4	7	9	14	16	-1.1%	-3.7%	5.3%	1.8%	4.6%	1.2%
Share of Renewables <sup>3</sup> (%)	24%	16%	13%	19%	28%	48%	69%	-3.7%	-2.4%	4.2%	3.9%	5.4%	3.7%
<b>Industry (incl. non-energy use)</b>	<b>15</b>	<b>24</b>	<b>32</b>	<b>38</b>	<b>43</b>	<b>48</b>	<b>45</b>	<b>5.3%</b>	<b>2.7%</b>	<b>1.7%</b>	<b>1.4%</b>	<b>1.0%</b>	<b>-0.6%</b>
Coal	5	10	9	9	10	7	4	6.5%	-0.8%	-0.3%	1.1%	-3.7%	-5.3%
Oil	6	8	8	8	8	7	5	2.9%	-0.2%	-0.7%	0.4%	-1.4%	-2.7%
Gas	1	2	7	8	8	11	9	10.1%	14.0%	2.2%	0.1%	2.9%	-2.1%
Electricity	2	4	7	10	14	17	20	5.4%	5.3%	4.3%	3.0%	2.3%	1.6%
Heat	0	0	1	2	2	2	2	50.7%	10.9%	2.6%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	0	0	1	2	4	5	n.s.	n.s.	n.s.	5.2%	9.1%	1.6%
<b>Buildings</b>	<b>15</b>	<b>20</b>	<b>29</b>	<b>34</b>	<b>34</b>	<b>33</b>	<b>30</b>	<b>2.6%</b>	<b>3.7%</b>	<b>1.6%</b>	<b>0.2%</b>	<b>-0.5%</b>	<b>-0.8%</b>
Coal	3	2	7	5	3	0	0	-4.5%	13.9%	-3.9%	-6.5%	-16.0%	-16.2%
Oil	3	4	1	1	1	1	1	1.4%	-8.7%	-1.9%	0.7%	-2.6%	-6.2%
Gas	0	3	6	10	8	5	2	50.4%	7.5%	4.7%	-1.7%	-5.5%	-9.3%
Electricity	1	4	7	10	14	16	19	10.7%	6.5%	3.4%	2.7%	1.8%	1.3%
Heat	0	1	2	1	3	5	5	7.4%	8.0%	-2.5%	9.4%	4.3%	1.1%
Biomass & Other	7	6	4	6	5	5	4	-1.1%	-3.7%	2.8%	-1.1%	0.0%	-3.2%
<b>Agriculture</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>4.1%</b>	<b>5.5%</b>	<b>-1.1%</b>	<b>1.4%</b>	<b>1.0%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	25.7%	-2.8%	-7.5%	-7.5%
Oil	2	3	4	4	4	2	2	3.4%	5.3%	-1.4%	-0.5%	-3.8%	-4.1%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	11.6%	-0.1%	-2.5%	-2.8%
Electricity	0	0	0	0	1	1	2	18.2%	6.2%	0.2%	5.1%	5.6%	3.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	45.3%	12.1%	3.7%
<b>Transport</b>	<b>9</b>	<b>12</b>	<b>14</b>	<b>24</b>	<b>28</b>	<b>28</b>	<b>23</b>	<b>2.4%</b>	<b>2.1%</b>	<b>5.4%</b>	<b>1.3%</b>	<b>0.0%</b>	<b>-1.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	9	12	14	23	22	18	10	2.4%	2.1%	5.0%	-0.4%	-2.0%	-5.9%
Gas	0	0	0	0	1	2	1	n.s.	36.7%	16.7%	17.3%	3.7%	-2.7%
Electricity	0	0	0	0	3	5	7	8.3%	-6.5%	24.6%	24.4%	6.3%	3.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	1	3	4	n.s.	n.s.	54.0%	9.9%	6.8%	5.3%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>3</b>	<b>5</b>	<b>5</b>	<b>9</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>4.0%</b>	<b>0.5%</b>	<b>6.6%</b>	<b>1.3%</b>	<b>1.4%</b>	<b>0.7%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Mediterranean Middle East	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	27	36	46	54	65	73	80	2.9%	2.5%	1.6%	1.9%	1.2%	1.0%
GDP per capita (ppp, k\$'05)	5	7	8	10	12	15	20	2.7%	1.5%	1.8%	2.0%	2.5%	2.4%
GDP per capita (mer, k\$'05)	3	5	5	6	7	9	12	4.0%	-0.1%	1.8%	2.0%	2.5%	2.4%
Share Value Added - Agriculture (%)	6	3	1	2	2	2	2	-4.6%	-13.2%	10.4%	-0.9%	-0.9%	-0.7%
Share Value Added - Industry (%)	6	8	10	12	12	11	11	2.7%	2.5%	2.1%	-0.2%	-0.3%	-0.4%
Share Value Added - Services (%)	89	89	89	86	86	87	87	0.0%	0.1%	-0.4%	0.1%	0.1%	0.1%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	18	21	26	-7.8%	10.3%	-2.2%	1.3%	1.2%	2.4%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	28	24	47	43	46	38	32	-1.2%	6.8%	-0.9%	0.8%	-2.0%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	111	172	200	195	208	165	88	4.5%	1.5%	-0.3%	0.7%	-2.3%	-6.1%
Total GHG (excl. sinks)	111	173	202	196	210	167	90	4.5%	1.6%	-0.3%	0.7%	-2.2%	-6.0%
Total GHG (energy, industry, agriculture)	111	173	202	196	210	167	90	4.5%	1.6%	-0.3%	0.7%	-2.2%	-6.0%
CO <sub>2</sub>	91	147	172	176	190	151	77	4.9%	1.6%	0.3%	0.8%	-2.3%	-6.4%
CH <sub>4</sub>	12	17	19	12	14	11	6	4.0%	0.8%	-4.1%	0.9%	-1.9%	-5.5%
N <sub>2</sub> O	7	7	8	4	3	2	2	0.6%	1.2%	-7.9%	-1.7%	-2.6%	-2.4%
F gases	1	1	3	4	3	3	5	3.4%	6.6%	3.0%	-2.8%	1.8%	3.4%
Total GHG from Energy and Industry	103	163	190	194	207	165	88	4.8%	1.5%	0.2%	0.7%	-2.2%	-6.1%
CO <sub>2</sub> Emissions from Fuel Comb.	83	133	162	164	175	136	69	4.9%	2.0%	0.1%	0.6%	-2.5%	-6.5%
Power generation/District heating	29	59	88	91	98	70	28	7.4%	4.1%	0.3%	0.7%	-3.3%	-8.6%
Industry	9	14	15	13	15	14	11	4.7%	1.0%	-1.6%	1.6%	-0.8%	-2.5%
Buildings	14	17	19	14	12	9	5	2.5%	0.7%	-3.0%	-1.1%	-3.0%	-5.2%
Agriculture	1	1	2	1	1	1	1	4.0%	2.5%	-3.7%	-0.3%	-3.6%	-3.7%
Transport	21	31	31	39	41	35	20	4.0%	0.0%	2.5%	0.3%	-1.3%	-5.4%
Other	9	10	7	5	7	6	4	1.2%	-4.2%	-2.7%	3.1%	-1.1%	-5.6%
CO <sub>2</sub> captured (CCS)	0	0	0	0	4	50	90	n.s.	n.s.	n.s.	n.s.	29.1%	6.1%
Coal	0	0	0	0	3	38	59	n.s.	n.s.	n.s.	n.s.	27.0%	4.6%
Gas	0	0	0	0	0	12	29	n.s.	n.s.	n.s.	n.s.	39.5%	8.9%
Biomass	0	0	0	0	0	0	3	n.s.	n.s.	n.s.	n.s.	24.7%	21.9%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	25	37	40	27	37	32	42	3.9%	0.8%	-3.9%	3.3%	-1.6%	2.8%
Coal	0	0	0	0	0	0	0	5.0%	-0.5%	n.s.	n.s.	n.s.	n.s.
Oil	23	31	28	15	17	1	0	3.1%	-0.7%	-6.0%	1.2%	-23.1%	n.s.
Natural gas	1	5	9	9	12	14	16	12.9%	7.2%	-0.9%	3.6%	1.5%	1.1%
Biomass	0	0	0	0	1	1	1	3.0%	1.3%	11.0%	3.2%	1.6%	-1.6%
Nuclear <sup>1</sup>	0	0	0	0	1	4	9	n.s.	n.s.	n.s.	25.3%	15.2%	8.0%
Hydro	0	0	0	0	0	0	0	1.5%	-0.6%	0.1%	1.0%	1.2%	0.8%
Other renewables	0	1	1	2	5	11	15	4.8%	6.8%	4.0%	11.1%	6.9%	3.7%
Net Imports	2	7	19	34	36	52	44						
Coal	2	7	8	13	14	19	17						
Oil	0	0	6	16	10	21	14						
Natural gas	0	0	5	4	12	11	11						
Biomass	0	0	0	0	0	1	2						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	27	44	58	60	73	83	86	4.9%	2.9%	0.4%	1.9%	1.4%	0.3%
Coal	2	7	8	13	14	19	17	11.2%	1.4%	5.8%	0.7%	2.7%	-0.8%
Oil	23	31	34	31	27	23	14	3.1%	1.1%	-0.9%	-1.5%	-1.8%	-4.9%
Natural gas	1	5	15	13	24	25	27	13.2%	11.0%	-1.1%	6.2%	0.5%	0.7%
Biomass	0	0	0	1	1	2	3	2.9%	1.3%	13.2%	6.1%	5.5%	5.4%
Nuclear <sup>1</sup>	0	0	0	0	1	4	9	n.s.	n.s.	n.s.	25.3%	15.2%	8.0%
Hydro	0	0	0	0	0	0	0	1.5%	-0.6%	0.1%	1.0%	1.2%	0.8%
Other renewables	0	1	1	2	5	11	15	4.8%	6.8%	4.0%	11.1%	6.9%	3.7%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	27	44	58	60	73	83	86	4.9%	2.9%	0.4%	1.9%	1.4%	0.3%
Energy for Power Generation	9	19	31	30	40	52	62	7.0%	5.1%	-0.2%	2.7%	2.7%	1.7%
Other Energy Transformation & Losses	3	3	2	3	5	6	7	-1.1%	-4.7%	8.0%	3.6%	1.9%	2.1%
Final consumption	18	29	37	38	46	51	50	5.0%	2.3%	0.5%	1.8%	1.0%	-0.1%
Steel, Non-Met. Minerals and Chem.	0	1	2	1	1	1	1	17.8%	2.1%	-2.5%	1.3%	-0.6%	-1.5%
Other Industry	3	4	5	5	6	7	8	2.1%	2.7%	-0.2%	2.4%	1.4%	0.9%
Non-Energy Use	1	4	3	3	3	3	3	11.9%	-2.3%	-1.8%	1.6%	0.5%	-1.2%
Residential	3	6	8	7	8	9	10	6.3%	3.3%	-0.9%	1.4%	1.1%	0.4%
Services	3	4	6	6	7	8	10	2.4%	2.9%	-0.1%	2.3%	1.6%	1.3%
Agriculture	0	1	1	1	1	1	1	4.6%	2.7%	-0.9%	2.0%	1.8%	1.7%
Road	6	9	12	16	18	20	18	3.7%	3.1%	2.7%	1.7%	0.7%	-1.1%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Aviation	0	0	0	0	0	0	0	32.1%	-12.3%	0.2%	3.5%	1.9%	-0.1%
Other Transport	0	0	0	0	0	0	0	n.s.	5.8%	-6.2%	2.0%	-0.8%	-1.5%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Mediterranean Middle East	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>9</b>	<b>18</b>	<b>29</b>	<b>28</b>	<b>33</b>	<b>37</b>	<b>37</b>	<b>7.3%</b>	<b>5.2%</b>	<b>-0.4%</b>	<b>1.6%</b>	<b>1.1%</b>	<b>0.0%</b>
Coal	2	6	7	13	13	18	16	10.6%	1.7%	5.4%	0.5%	2.9%	-0.7%
Oil	6	9	9	6	4	4	2	4.5%	0.2%	-3.8%	-4.4%	0.7%	-6.5%
Gas	1	2	13	9	16	15	18	13.8%	18.1%	-3.1%	5.5%	-0.6%	2.1%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	9.0%	3.4%	4.2%	2.0%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>38</b>	<b>85</b>	<b>136</b>	<b>145</b>	<b>205</b>	<b>280</b>	<b>375</b>	<b>8.5%</b>	<b>4.8%</b>	<b>0.7%</b>	<b>3.5%</b>	<b>3.2%</b>	<b>3.0%</b>
Coal	10	29	34	60	65	84	79	10.9%	1.6%	5.7%	0.8%	2.7%	-0.7%
of which CCS	0	0	0	0	4	43	71	n.s.	n.s.	n.s.	n.s.	27.2%	5.1%
Oil	21	42	39	27	17	18	10	7.1%	-0.8%	-3.5%	-4.5%	0.6%	-6.2%
Gas	3	10	59	48	83	77	108	13.6%	19.3%	-2.0%	5.5%	-0.7%	3.5%
of which CCS	0	0	0	0	1	34	80	n.s.	n.s.	n.s.	n.s.	39.4%	9.1%
Biomass & Waste	0	0	0	0	0	0	1	n.s.	n.s.	9.0%	4.8%	5.3%	2.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	8.4%
Nuclear	0	0	0	0	4	17	37	n.s.	n.s.	n.s.	25.6%	15.2%	7.9%
Hydro	3	4	4	4	4	4	5	1.5%	-0.6%	0.1%	1.0%	1.2%	0.8%
Wind	0	0	0	1	12	41	73	11.6%	17.0%	54.5%	27.2%	12.8%	5.7%
Solar	0	0	0	5	20	37	61	n.s.	n.s.	34.6%	14.9%	6.4%	5.2%
Other	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	35.0%	22.0%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>11</b>	<b>20</b>	<b>27</b>	<b>39</b>	<b>55</b>	<b>70</b>	<b>108</b>	<b>6.4%</b>	<b>2.9%</b>	<b>3.7%</b>	<b>3.4%</b>	<b>2.5%</b>	<b>4.4%</b>
Coal	2	4	5	9	12	12	12	7.8%	1.2%	6.0%	3.2%	0.2%	-0.3%
of which CCS	0	0	0	0	1	6	10	n.s.	n.s.	n.s.	n.s.	27.0%	5.6%
Oil	7	9	6	6	4	3	3	2.9%	-4.3%	0.3%	-4.2%	-3.6%	0.1%
Gas	1	5	15	19	19	11	18	19.5%	11.5%	2.8%	-0.1%	-5.1%	4.8%
of which CCS	0	0	0	0	0	4	10	n.s.	n.s.	n.s.	n.s.	39.4%	9.6%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	5.1%	4.8%	5.1%	2.5%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	8.4%
Nuclear	0	0	0	0	1	3	6	n.s.	n.s.	n.s.	25.3%	15.0%	7.7%
Hydro	1	2	2	2	2	2	2	4.6%	-2.0%	-0.4%	1.0%	1.2%	0.8%
Wind	0	0	0	0	5	17	31	n.s.	18.1%	51.5%	27.0%	13.0%	6.0%
Solar	0	0	0	3	12	22	36	n.s.	n.s.	33.8%	14.8%	6.0%	5.0%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	34.3%	21.5%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>18</b>	<b>29</b>	<b>37</b>	<b>38</b>	<b>46</b>	<b>51</b>	<b>50</b>	<b>5.0%</b>	<b>2.3%</b>	<b>0.5%</b>	<b>1.8%</b>	<b>1.0%</b>	<b>-0.1%</b>
Coal	0	0	0	1	1	1	0	30.2%	-0.1%	13.9%	3.1%	-2.5%	-1.7%
Oil	14	20	24	24	22	17	11	3.5%	1.9%	0.0%	-0.9%	-2.3%	-4.7%
Gas	1	3	2	2	5	7	5	12.8%	-3.6%	1.6%	10.0%	3.0%	-2.9%
Electricity	3	6	9	10	15	20	27	8.4%	4.8%	0.8%	3.7%	3.2%	3.0%
Heat	0	1	1	1	3	4	4	4.8%	6.6%	0.9%	6.9%	3.8%	-0.2%
Biomass & Other	0	0	0	0	1	2	3	2.9%	-0.1%	11.6%	6.9%	7.2%	6.3%
Share of Renewables <sup>3</sup> (%)	4%	4%	5%	7%	16%	30%	47%	-0.8%	1.5%	3.6%	9.0%	6.8%	4.6%
<b>Industry (incl. non-energy use)</b>	<b>5</b>	<b>9</b>	<b>10</b>	<b>9</b>	<b>11</b>	<b>12</b>	<b>12</b>	<b>6.9%</b>	<b>0.7%</b>	<b>-1.1%</b>	<b>2.0%</b>	<b>0.9%</b>	<b>0.1%</b>
Coal	0	0	0	1	1	1	0	30.2%	-0.1%	13.9%	3.1%	-2.5%	-1.7%
Oil	4	5	5	4	4	4	3	2.6%	1.2%	-2.2%	-0.2%	-1.7%	-2.3%
Gas	0	2	2	1	2	3	3	55.4%	-3.6%	-3.0%	6.3%	3.8%	-0.7%
Electricity	1	2	3	3	4	4	6	7.3%	3.7%	0.3%	2.7%	2.1%	2.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	7.1%	2.9%	1.6%
<b>Buildings</b>	<b>7</b>	<b>10</b>	<b>14</b>	<b>13</b>	<b>16</b>	<b>18</b>	<b>19</b>	<b>4.4%</b>	<b>3.1%</b>	<b>-0.6%</b>	<b>1.8%</b>	<b>1.3%</b>	<b>0.8%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	4	5	6	4	3	1	1	3.5%	0.9%	-4.0%	-3.7%	-6.5%	-6.6%
Gas	1	0	0	1	2	2	1	-9.1%	-4.0%	14.0%	9.4%	1.9%	-4.2%
Electricity	2	4	7	7	8	10	13	9.1%	5.4%	0.6%	2.0%	2.1%	2.6%
Heat	0	1	1	1	3	4	4	4.8%	6.6%	0.9%	6.9%	3.8%	-0.2%
Biomass & Other	0	0	0	0	0	0	0	2.9%	-0.1%	4.7%	-2.7%	-0.7%	-5.4%
<b>Agriculture</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4.6%</b>	<b>2.7%</b>	<b>-0.9%</b>	<b>2.0%</b>	<b>1.8%</b>	<b>1.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	1	0	0	0	0	4.0%	2.5%	-3.7%	-0.3%	-3.6%	-3.7%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	1	1	1	5.8%	3.0%	3.0%	2.8%	3.0%	2.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	12.7%	4.0%
<b>Transport</b>	<b>6</b>	<b>9</b>	<b>12</b>	<b>16</b>	<b>19</b>	<b>20</b>	<b>18</b>	<b>3.9%</b>	<b>2.8%</b>	<b>2.7%</b>	<b>1.7%</b>	<b>0.7%</b>	<b>-1.1%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	6	9	12	15	14	12	7	3.9%	2.8%	2.3%	-0.5%	-1.9%	-5.3%
Gas	0	0	0	0	2	2	1	n.s.	n.s.	n.s.	22.1%	3.0%	-5.8%
Electricity	0	0	0	0	2	5	7	n.s.	n.s.	n.s.	28.7%	8.3%	4.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	2	n.s.	n.s.	n.s.	12.1%	8.5%	7.6%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>-1.1%</b>	<b>-4.7%</b>	<b>8.0%</b>	<b>3.6%</b>	<b>1.9%</b>	<b>2.1%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Rest Gulf	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	34	48	69	90	111	133	155	3.3%	3.8%	2.7%	2.1%	1.8%	1.5%
GDP per capita (ppp, k\$'05)	6	11	12	11	13	14	15	7.2%	0.5%	-0.7%	1.7%	0.9%	0.4%
GDP per capita (mer, k\$'05)	5	7	8	10	12	13	13	4.2%	1.3%	2.3%	1.7%	0.9%	0.4%
Share Value Added - Agriculture (%)	9	6	1	1	1	1	1	-5.1%	-15.7%	-4.9%	-0.7%	-0.3%	-0.1%
Share Value Added - Industry (%)	42	49	50	44	44	43	43	1.5%	0.1%	-1.1%	-0.2%	-0.1%	-0.1%
Share Value Added - Services (%)	48	45	49	55	56	56	57	-0.7%	0.9%	1.1%	0.2%	0.1%	0.0%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	18	21	26	-7.8%	10.3%	-2.2%	1.3%	1.2%	2.4%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	28	24	47	43	46	38	32	-1.2%	6.8%	-0.9%	0.8%	-2.0%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	290	428	714	962	985	696	409	4.0%	5.3%	3.0%	0.2%	-3.4%	-5.2%
Total GHG (excl. sinks)	290	429	715	963	987	698	411	4.0%	5.2%	3.0%	0.2%	-3.4%	-5.2%
Total GHG (energy, industry, agriculture)	290	429	715	963	987	698	411	4.0%	5.2%	3.0%	0.2%	-3.4%	-5.2%
CO <sub>2</sub>	220	333	569	814	856	571	390	4.3%	5.5%	3.6%	0.5%	-4.0%	-3.7%
CH <sub>4</sub>	57	85	131	137	121	119	14	4.2%	4.4%	0.5%	-1.2%	-0.2%	-19.5%
N <sub>2</sub> O	10	9	12	8	8	6	5	-1.3%	2.8%	-3.5%	-0.8%	-2.2%	-2.7%
F gases	4	2	4	4	3	2	2	-5.5%	6.0%	0.0%	-4.5%	-0.4%	-1.3%
Total GHG from Energy and Industry	279	416	699	956	980	692	406	4.1%	5.3%	3.2%	0.2%	-3.4%	-5.2%
CO <sub>2</sub> Emissions from Fuel Comb.	180	292	508	728	762	494	345	4.9%	5.7%	3.7%	0.5%	-4.3%	-3.5%
Power generation/District heating	60	105	204	241	266	113	67	5.7%	6.9%	1.7%	1.0%	-8.2%	-5.1%
Industry	48	73	130	248	265	224	181	4.2%	5.9%	6.7%	0.7%	-1.7%	-2.1%
Buildings	9	14	17	24	25	15	6	4.5%	2.3%	3.2%	0.6%	-5.4%	-8.4%
Agriculture	1	1	3	3	3	2	1	9.9%	9.4%	-0.8%	-0.5%	-4.0%	-4.3%
Transport	42	55	83	112	106	82	47	2.8%	4.2%	3.1%	-0.6%	-2.5%	-5.4%
Other	21	44	71	100	98	58	42	7.8%	4.9%	3.5%	-0.3%	-5.0%	-3.3%
CO <sub>2</sub> captured (CCS)	0	0	0	0	27	149	227	n.s.	n.s.	n.s.	n.s.	18.5%	4.3%
Coal	0	0	0	0	1	11	36	n.s.	n.s.	n.s.	n.s.	32.8%	12.1%
Gas	0	0	0	0	27	137	188	n.s.	n.s.	n.s.	n.s.	17.8%	3.2%
Biomass	0	0	0	0	0	0	3	n.s.	n.s.	n.s.	n.s.	21.3%	27.3%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	367	559	728	1 103	1 343	1 593	373	4.3%	2.7%	4.2%	2.0%	1.7%	-13.5%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	331	482	531	778	869	1 150	7	3.8%	1.0%	3.9%	1.1%	2.8%	-40.2%
Natural gas	36	76	196	324	470	430	350	7.8%	9.9%	5.1%	3.8%	-0.9%	-2.0%
Biomass	0	0	0	1	1	2	2	2.0%	6.1%	17.1%	8.9%	3.6%	-2.9%
Nuclear <sup>1</sup>	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	19.7%	6.2%	1.2%
Hydro	0	0	0	0	1	1	1	-13.5%	22.8%	2.0%	1.8%	1.9%	1.5%
Other renewables	0	0	0	0	1	9	13	n.s.	n.s.	8.1%	20.9%	21.1%	3.6%
Net Imports	- 297	- 447	- 523	- 783	- 992	- 1 290	- 92						
Coal	0	0	1	3	4	6	11						
Oil	- 295	- 431	- 444	- 683	- 777	- 1 078	40						
Natural gas	- 2	- 16	- 80	- 104	- 220	- 219	- 149						
Biomass	0	0	0	0	0	1	3						
Biofuels	0	0	0	0	0	0	2						
Electricity	0	0	1	1	1	1	1						
Primary Energy Demand <sup>2</sup>	69	111	205	320	351	303	280	4.8%	6.3%	4.5%	0.9%	-1.5%	-0.8%
Coal	0	0	1	3	4	6	11	n.s.	n.s.	14.2%	5.1%	3.2%	6.4%
Oil	36	51	87	95	93	72	47	3.7%	5.5%	0.9%	-0.2%	-2.6%	-4.1%
Natural gas	33	60	116	220	249	211	201	6.0%	6.9%	6.6%	1.3%	-1.7%	-0.5%
Biomass	0	0	0	1	2	3	4	2.1%	6.1%	18.0%	8.8%	5.9%	4.5%
Nuclear <sup>1</sup>	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	19.7%	6.2%	1.2%
Hydro	0	0	0	0	1	1	1	-13.5%	22.8%	2.0%	1.8%	1.9%	1.5%
Other renewables	0	0	0	0	1	9	13	n.s.	n.s.	8.1%	20.9%	21.1%	3.6%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	69	111	205	320	351	303	280	4.8%	6.3%	4.5%	0.9%	-1.5%	-0.8%
Energy for Power Generation	23	40	79	98	116	101	106	5.7%	7.0%	2.2%	1.7%	-1.4%	0.5%
Other Energy Transformation & Losses	8	14	28	56	62	56	58	5.9%	7.3%	7.1%	1.1%	-1.0%	0.3%
Final consumption	44	67	118	196	212	190	169	4.3%	5.8%	5.2%	0.7%	-1.1%	-1.2%
Steel, Non-Met. Minerals and Chem.	2	3	6	15	14	10	7	5.6%	5.0%	10.5%	-0.7%	-3.8%	-2.9%
Other Industry	17	26	45	81	88	81	75	4.6%	5.6%	6.1%	0.9%	-0.8%	-0.8%
Non-Energy Use	5	6	13	24	27	25	23	3.5%	7.2%	6.3%	1.5%	-0.8%	-1.1%
Residential	6	9	14	20	22	20	19	4.3%	4.2%	3.9%	1.0%	-1.0%	-0.3%
Services	1	3	8	11	15	15	16	11.0%	10.6%	3.7%	2.7%	0.1%	0.3%
Agriculture	0	0	1	1	1	1	1	7.1%	9.5%	-0.6%	1.4%	1.1%	1.0%
Road	14	19	32	44	43	37	27	3.3%	5.1%	3.1%	-0.1%	-1.6%	-3.0%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	2.5%	-1.8%	-2.4%	-3.0%
Other Transport	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest Gulf	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>23</b>	<b>40</b>	<b>78</b>	<b>97</b>	<b>114</b>	<b>90</b>	<b>92</b>	<b>5.8%</b>	<b>7.0%</b>	<b>2.2%</b>	<b>1.6%</b>	<b>-2.3%</b>	<b>0.1%</b>
Coal	0	0	0	1	2	3	4	n.s.	n.s.	n.s.	10.7%	4.9%	2.7%
Oil	9	14	26	16	15	10	6	5.0%	6.2%	-4.7%	-0.5%	-4.4%	-3.9%
Gas	14	26	52	81	97	78	82	6.3%	7.4%	4.4%	1.9%	-2.1%	0.4%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	5.0%	1.6%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>79</b>	<b>140</b>	<b>285</b>	<b>438</b>	<b>561</b>	<b>579</b>	<b>663</b>	<b>5.9%</b>	<b>7.4%</b>	<b>4.4%</b>	<b>2.5%</b>	<b>0.3%</b>	<b>1.4%</b>
Coal	0	0	0	3	8	13	17	n.s.	n.s.	n.s.	11.1%	4.7%	2.9%
of which CCS	0	0	0	0	1	7	14	n.s.	n.s.	n.s.	n.s.	24.2%	7.3%
Oil	31	53	62	67	65	41	27	5.5%	1.6%	0.8%	-0.4%	-4.5%	-3.9%
Gas	45	86	217	359	465	434	486	6.7%	9.7%	5.2%	2.6%	-0.7%	1.1%
of which CCS	0	0	0	0	41	288	407	n.s.	n.s.	n.s.	n.s.	21.6%	3.5%
Biomass & Waste	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	5.2%	1.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	5.8%
Nuclear	0	0	0	0	1	2	2	n.s.	n.s.	n.s.	19.9%	6.3%	1.0%
Hydro	3	1	5	6	7	8	10	-13.5%	22.8%	2.0%	1.8%	1.9%	1.5%
Wind	0	0	0	1	7	20	44	n.s.	n.s.	n.s.	26.5%	11.2%	8.2%
Solar	0	0	1	2	7	59	72	n.s.	n.s.	4.5%	16.0%	23.2%	1.9%
Other	0	0	0	0	0	0	4	n.s.	n.s.	n.s.	n.s.	32.3%	29.6%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>26</b>	<b>35</b>	<b>68</b>	<b>107</b>	<b>122</b>	<b>140</b>	<b>159</b>	<b>2.9%</b>	<b>7.0%</b>	<b>4.6%</b>	<b>1.3%</b>	<b>1.4%</b>	<b>1.2%</b>
Coal	0	0	0	0	1	2	2	n.s.	n.s.	n.s.	11.3%	4.4%	2.8%
of which CCS	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	23.9%	7.3%
Oil	14	14	16	20	13	10	8	-0.1%	1.2%	2.6%	-4.0%	-2.8%	-2.3%
Gas	10	18	50	82	96	79	81	5.7%	10.5%	5.2%	1.6%	-2.0%	0.3%
of which CCS	0	0	0	0	5	36	51	n.s.	n.s.	n.s.	n.s.	21.5%	3.6%
Biomass & Waste	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	4.9%	1.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	5.8%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	19.7%	6.1%	0.8%
Hydro	2	3	3	3	4	5	5	4.7%	-0.4%	2.3%	1.8%	1.9%	1.5%
Wind	0	0	0	0	3	8	18	n.s.	n.s.	n.s.	26.2%	11.0%	8.0%
Solar	0	0	1	1	4	37	43	n.s.	n.s.	5.5%	17.2%	23.6%	1.7%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	31.6%	29.0%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>44</b>	<b>67</b>	<b>118</b>	<b>196</b>	<b>212</b>	<b>190</b>	<b>169</b>	<b>4.3%</b>	<b>5.8%</b>	<b>5.2%</b>	<b>0.7%</b>	<b>-1.1%</b>	<b>-1.2%</b>
Coal	0	0	1	2	3	3	7	n.s.	n.s.	11.2%	2.5%	2.0%	8.6%
Oil	24	33	55	78	79	66	48	3.2%	5.3%	3.5%	0.2%	-1.8%	-3.2%
Gas	15	25	43	86	90	76	60	5.2%	5.7%	7.3%	0.5%	-1.7%	-2.2%
Electricity	6	10	19	30	38	40	45	6.2%	6.8%	4.4%	2.4%	0.5%	1.2%
Heat	0	0	0	0	0	2	3	n.s.	n.s.	n.s.	n.s.	35.7%	2.6%
Biomass & Other	0	0	0	1	1	3	5	2.1%	6.1%	17.4%	8.0%	7.1%	7.2%
Share of Renewables <sup>3</sup> (%)	1%	0%	1%	1%	1%	7%	13%	-11.9%	11.4%	1.8%	8.5%	17.4%	6.5%
<b>Industry (incl. non-energy use)</b>	<b>23</b>	<b>36</b>	<b>63</b>	<b>120</b>	<b>130</b>	<b>116</b>	<b>105</b>	<b>4.4%</b>	<b>5.9%</b>	<b>6.6%</b>	<b>0.8%</b>	<b>-1.1%</b>	<b>-1.0%</b>
Coal	0	0	1	2	3	3	7	n.s.	n.s.	11.2%	2.5%	2.0%	8.6%
Oil	7	9	16	27	34	33	29	2.4%	6.4%	5.1%	2.4%	-0.4%	-1.1%
Gas	15	24	42	84	84	70	57	5.1%	5.7%	7.0%	0.0%	-1.7%	-2.0%
Electricity	1	3	4	7	9	9	10	6.3%	3.1%	6.6%	2.8%	0.6%	1.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-6.2%	-5.4%	-2.6%
<b>Buildings</b>	<b>7</b>	<b>12</b>	<b>22</b>	<b>31</b>	<b>37</b>	<b>35</b>	<b>35</b>	<b>5.5%</b>	<b>6.1%</b>	<b>3.8%</b>	<b>1.7%</b>	<b>-0.5%</b>	<b>0.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	4	5	6	4	2	1	4.3%	2.5%	1.2%	-3.7%	-7.7%	-8.7%
Gas	0	0	0	2	5	4	2	12.0%	-2.7%	28.4%	10.0%	-3.3%	-8.2%
Electricity	4	7	16	23	27	27	30	6.2%	7.9%	3.8%	1.7%	-0.1%	0.9%
Heat	0	0	0	0	0	2	3	n.s.	n.s.	n.s.	n.s.	35.7%	2.6%
Biomass & Other	0	0	0	0	0	0	0	2.1%	6.1%	9.8%	0.9%	-4.6%	-8.6%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>7.1%</b>	<b>9.5%</b>	<b>-0.6%</b>	<b>1.4%</b>	<b>1.1%</b>	<b>1.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	1	1	1	1	0	9.9%	9.4%	-0.8%	-0.5%	-4.0%	-4.3%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	1	-24.9%	22.5%	5.0%	17.3%	9.3%	3.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	49.5%	15.6%	4.7%
<b>Transport</b>	<b>14</b>	<b>19</b>	<b>32</b>	<b>44</b>	<b>43</b>	<b>37</b>	<b>27</b>	<b>3.3%</b>	<b>5.2%</b>	<b>3.1%</b>	<b>-0.1%</b>	<b>-1.6%</b>	<b>-3.0%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	14	19	32	44	40	31	17	3.3%	5.2%	3.1%	-0.8%	-2.7%	-5.6%
Gas	0	0	0	0	1	2	1	n.s.	n.s.	n.s.	23.7%	3.0%	-1.2%
Electricity	0	0	0	0	1	3	4	n.s.	n.s.	n.s.	33.7%	7.1%	4.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	2	5	n.s.	n.s.	n.s.	28.3%	10.1%	8.5%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>8</b>	<b>14</b>	<b>28</b>	<b>56</b>	<b>62</b>	<b>56</b>	<b>58</b>	<b>5.9%</b>	<b>7.3%</b>	<b>7.1%</b>	<b>1.1%</b>	<b>-1.0%</b>	<b>0.3%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

China	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	1 155	1 270	1 342	1 403	1 416	1 395	1 349	1.0%	0.5%	0.5%	0.1%	-0.1%	-0.3%
GDP per capita (ppp, k\$'05)	1	3	7	13	21	30	38	8.9%	9.6%	6.5%	4.9%	3.6%	2.3%
GDP per capita (mer, k\$'05)	1	1	3	6	9	13	16	8.6%	9.4%	6.4%	4.9%	3.6%	2.3%
Share Value Added - Agriculture (%)	22	13	10	8	8	7	7	-5.1%	-3.0%	-1.7%	-0.9%	-0.4%	-0.2%
Share Value Added - Industry (%)	34	42	45	43	37	32	27	2.1%	0.8%	-0.6%	-1.3%	-1.6%	-1.5%
Share Value Added - Services (%)	44	45	45	49	55	61	66	0.3%	0.0%	0.9%	1.2%	1.0%	0.7%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	18	21	26	-7.8%	10.3%	-2.2%	1.3%	1.2%	2.4%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	28	24	47	43	46	38	32	-1.2%	6.8%	-0.9%	0.8%	-2.0%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	3 850	4 827	11 074	14 731	13 247	6 579	2 398	2.3%	8.7%	2.9%	-1.1%	-6.8%	-9.6%
Total GHG (excl. sinks)	3 953	5 159	11 367	15 132	13 647	6 983	2 966	2.7%	8.2%	2.9%	-1.0%	-6.5%	-8.2%
Total GHG (energy, industry, agriculture)	3 953	5 159	11 367	15 132	13 647	6 983	2 966	2.7%	8.2%	2.9%	-1.0%	-6.5%	-8.2%
CO <sub>2</sub>	2 587	3 686	9 016	12 712	11 803	5 689	2 126	3.6%	9.4%	3.5%	-0.7%	-7.0%	-9.4%
CH <sub>4</sub>	1 016	1 045	1 644	1 562	1 101	747	452	0.3%	4.6%	-0.5%	-3.4%	-3.8%	-4.9%
N <sub>2</sub> O	338	378	529	617	565	354	183	1.1%	3.4%	1.5%	-0.9%	-4.6%	-6.4%
F gases	13	51	177	242	178	194	205	14.8%	13.3%	3.2%	-3.0%	0.9%	0.6%
Total GHG from Energy and Industry	3 177	4 371	10 363	14 031	12 725	6 391	2 663	3.2%	9.0%	3.1%	-1.0%	-6.7%	-8.4%
CO <sub>2</sub> Emissions from Fuel Comb.	2 348	3 251	7 869	10 982	9 877	4 137	1 414	3.3%	9.2%	3.4%	-1.1%	-8.3%	-10.2%
Power generation/District heating	615	1 235	3 203	4 701	4 036	702	-312	7.2%	10.0%	3.9%	-1.5%	-16.0%	n.s.
Industry	921	1 049	2 828	3 387	2 937	1 306	462	1.3%	10.4%	1.8%	-1.4%	-7.8%	-9.9%
Buildings	446	319	491	589	481	275	97	-3.3%	4.4%	1.8%	-2.0%	-5.4%	-9.9%
Agriculture	92	48	89	102	85	48	27	-6.3%	6.3%	1.4%	-1.8%	-5.5%	-5.6%
Transport	119	242	545	991	1 203	1 132	743	7.3%	8.4%	6.2%	2.0%	-0.6%	-4.1%
Other	155	357	714	1 212	1 135	673	396	8.7%	7.2%	5.4%	-0.7%	-5.1%	-5.2%
CO <sub>2</sub> captured (CCS)	0	0	0	0	185	1 816	2 771	n.s.	n.s.	n.s.	n.s.	25.7%	4.3%
Coal	0	0	0	0	178	1 509	1 803	n.s.	n.s.	n.s.	n.s.	23.8%	1.8%
Gas	0	0	0	0	7	123	305	n.s.	n.s.	n.s.	n.s.	32.8%	9.5%
Biomass	0	0	0	0	0	184	663	n.s.	n.s.	n.s.	3.4%	n.s.	13.7%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	943	1 188	2 306	2 898	3 014	2 625	2 550	2.3%	6.9%	2.3%	0.4%	-1.4%	-0.3%
Coal	581	777	1 713	1 975	1 503	698	536	2.9%	8.2%	1.4%	-2.7%	-7.4%	-2.6%
Oil	137	161	201	239	237	144	103	1.6%	2.3%	1.8%	-0.1%	-4.9%	-3.3%
Natural gas	13	23	82	161	314	387	312	5.8%	13.5%	7.0%	6.9%	2.1%	-2.1%
Biomass	200	202	213	240	290	333	340	0.1%	0.5%	1.2%	1.9%	1.4%	0.2%
Nuclear <sup>1</sup>	0	4	19	88	306	519	683	n.s.	15.9%	16.4%	13.3%	5.4%	2.8%
Hydro	11	19	62	108	152	165	166	5.8%	12.5%	5.7%	3.5%	0.8%	0.1%
Other renewables	0	1	15	88	211	378	411	29.4%	29.8%	19.6%	9.2%	6.0%	0.8%
Net Imports	- 55	8	348	980	1 160	877	616						
Coal	- 31	- 48	115	407	441	199	127						
Oil	- 26	59	228	513	608	563	305						
Natural gas	1	- 3	7	63	112	76	53						
Biomass	0	0	0	0	0	34	115						
Biofuels	0	0	0	0	1	7	17						
Electricity	0	- 1	- 1	- 2	- 2	- 2	- 2						
Primary Energy Demand <sup>2</sup>	888	1 195	2 654	3 879	4 174	3 502	3 167	3.0%	8.3%	3.9%	0.7%	-1.7%	-1.0%
Coal	550	729	1 828	2 381	1 945	897	663	2.9%	9.6%	2.7%	-2.0%	-7.4%	-3.0%
Oil	111	220	429	752	845	707	408	7.1%	6.9%	5.8%	1.2%	-1.8%	-5.3%
Natural gas	14	20	89	224	426	463	365	3.4%	16.1%	9.6%	6.6%	0.8%	-2.3%
Biomass	200	202	213	240	290	368	456	0.1%	0.5%	1.2%	1.9%	2.4%	2.2%
Nuclear <sup>1</sup>	0	4	19	88	306	519	683	n.s.	15.9%	16.4%	13.3%	5.4%	2.8%
Hydro	11	19	62	108	152	165	166	5.8%	12.5%	5.7%	3.5%	0.8%	0.1%
Other renewables	0	1	15	88	211	378	411	29.4%	29.8%	19.6%	9.2%	6.0%	0.8%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	888	1 195	2 654	3 879	4 174	3 502	3 167	3.0%	8.3%	3.9%	0.7%	-1.7%	-1.0%
Energy for Power Generation	168	339	919	1 518	1 846	1 843	2 076	7.3%	10.5%	5.1%	2.0%	0.0%	1.2%
Other Energy Transformation & Losses	59	120	288	465	465	331	296	7.3%	9.2%	4.9%	0.0%	-3.3%	-1.1%
Final consumption	715	854	1 817	2 578	2 774	2 359	1 964	1.8%	7.8%	3.6%	0.7%	-1.6%	-1.8%
Steel, Non-Met. Minerals and Chem.	161	247	675	896	863	575	437	4.4%	10.6%	2.9%	-0.4%	-4.0%	-2.7%
Other Industry	119	117	311	469	556	507	452	-0.2%	10.3%	4.2%	1.7%	-0.9%	-1.1%
Non-Energy Use	44	61	137	190	189	149	102	3.4%	8.3%	3.4%	-0.1%	-2.4%	-3.7%
Residential	300	282	357	436	430	359	280	-0.6%	2.4%	2.0%	-0.1%	-1.8%	-2.5%
Services	25	39	95	163	215	243	263	4.4%	9.4%	5.6%	2.8%	1.3%	0.8%
Agriculture	30	18	34	40	43	45	45	-4.8%	6.2%	1.7%	0.8%	0.4%	0.1%
Road	21	63	169	312	383	388	307	11.9%	10.3%	6.3%	2.1%	0.1%	-2.3%
Rail	12	10	12	14	17	19	20	-1.9%	2.5%	1.7%	1.9%	1.2%	0.5%
Aviation	1	4	11	25	36	38	30	22.1%	10.3%	8.4%	3.7%	0.5%	-2.3%
Other Transport	2	12	17	32	42	36	26	16.9%	3.8%	6.5%	2.7%	-1.6%	-3.1%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

China	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>157</b>	<b>314</b>	<b>823</b>	<b>1 235</b>	<b>1 177</b>	<b>780</b>	<b>817</b>	<b>7.2%</b>	<b>10.1%</b>	<b>4.1%</b>	<b>-0.5%</b>	<b>-4.0%</b>	<b>0.5%</b>
Coal	144	299	792	1 130	946	450	386	7.6%	10.2%	3.6%	-1.8%	-7.2%	-1.5%
Oil	12	13	4	29	48	39	18	0.6%	-11.6%	22.5%	5.2%	-2.0%	-7.4%
Gas	1	1	15	48	127	141	161	7.5%	28.1%	12.0%	10.3%	1.0%	1.3%
Biomass & Waste	0	1	12	28	56	150	251	n.s.	30.2%	9.3%	7.0%	10.3%	5.3%
Other	0	0	0	0	0	0	0	6.7%	1.4%	0.8%	-16.7%	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>621</b>	<b>1 356</b>	<b>4 234</b>	<b>7 948</b>	<b>10 598</b>	<b>11 531</b>	<b>12 931</b>	<b>8.1%</b>	<b>12.1%</b>	<b>6.5%</b>	<b>2.9%</b>	<b>0.8%</b>	<b>1.2%</b>
Coal	441	1 061	3 250	5 217	4 489	2 080	1 822	9.2%	11.8%	4.8%	-1.5%	-7.4%	-1.3%
of which CCS	0	0	0	0	217	1 508	1 749	n.s.	n.s.	n.s.	n.s.	21.4%	1.5%
Oil	50	47	13	124	207	169	79	-0.6%	-12.0%	25.1%	5.2%	-2.0%	-7.3%
Gas	3	6	69	233	665	819	994	7.6%	28.2%	13.0%	11.0%	2.1%	2.0%
of which CCS	0	0	0	0	15	300	812	n.s.	n.s.	n.s.	n.s.	34.8%	10.5%
Biomass & Waste	0	2	34	96	224	679	1 205	n.s.	30.2%	11.0%	8.8%	11.7%	5.9%
of which CCS	0	0	0	0	0	204	694	n.s.	n.s.	n.s.	n.s.	n.s.	13.0%
Nuclear	0	17	74	347	1 234	2 109	2 781	n.s.	16.0%	16.7%	13.5%	5.5%	2.8%
Hydro	127	222	722	1 254	1 768	1 917	1 929	5.8%	12.5%	5.7%	3.5%	0.8%	0.1%
Wind	0	1	70	537	1 549	2 584	2 382	n.s.	n.s.	22.5%	11.2%	5.2%	-0.8%
Solar	0	0	1	138	459	1 161	1 680	26.7%	31.7%	n.s.	12.8%	9.7%	3.8%
Other	0	0	0	0	2	14	57	6.7%	2.2%	7.1%	23.2%	20.1%	15.4%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>149</b>	<b>336</b>	<b>1 012</b>	<b>1 885</b>	<b>3 010</b>	<b>3 667</b>	<b>3 730</b>	<b>8.5%</b>	<b>11.7%</b>	<b>6.4%</b>	<b>4.8%</b>	<b>2.0%</b>	<b>0.2%</b>
Coal	92	225	701	1 055	1 214	718	351	9.3%	12.0%	4.2%	1.4%	-5.1%	-6.9%
of which CCS	0	0	0	0	29	211	316	n.s.	n.s.	n.s.	n.s.	22.0%	4.1%
Oil	18	20	15	24	33	33	38	1.1%	-2.9%	4.8%	3.2%	-0.1%	1.5%
Gas	3	8	31	63	123	185	224	11.7%	14.3%	7.2%	7.0%	4.2%	1.9%
of which CCS	0	0	0	0	2	38	120	n.s.	n.s.	n.s.	n.s.	35.1%	12.1%
Biomass & Waste	0	0	7	14	31	92	165	n.s.	30.4%	7.7%	8.0%	11.5%	6.0%
of which CCS	0	0	0	0	0	27	92	n.s.	n.s.	n.s.	n.s.	n.s.	13.2%
Nuclear	0	2	10	49	172	288	372	n.s.	16.6%	17.2%	13.3%	5.3%	2.6%
Hydro	36	79	216	357	477	511	514	8.2%	10.5%	5.2%	2.9%	0.7%	0.1%
Wind	0	0	31	230	652	1 068	982	n.s.	57.2%	22.0%	11.0%	5.1%	-0.8%
Solar	0	0	1	94	309	771	1 076	26.7%	31.7%	n.s.	12.7%	9.6%	3.4%
Other	0	0	0	0	0	2	7	0.0%	0.4%	3.6%	22.9%	19.5%	14.9%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>715</b>	<b>854</b>	<b>1 817</b>	<b>2 578</b>	<b>2 774</b>	<b>2 359</b>	<b>1 964</b>	<b>1.8%</b>	<b>7.8%</b>	<b>3.6%</b>	<b>0.7%</b>	<b>-1.6%</b>	<b>-1.8%</b>
Coal	365	340	804	883	685	291	172	-0.7%	9.0%	0.9%	-2.5%	-8.2%	-5.2%
Oil	84	180	383	665	731	613	358	7.9%	7.8%	5.7%	1.0%	-1.8%	-5.2%
Gas	10	15	61	141	227	239	138	4.2%	15.2%	8.7%	4.8%	0.5%	-5.3%
Electricity	41	89	297	565	759	832	929	8.0%	12.8%	6.7%	3.0%	0.9%	1.1%
Heat	13	28	72	114	142	172	180	7.7%	10.0%	4.7%	2.2%	2.0%	0.5%
Biomass & Other	200	202	200	209	230	212	187	0.1%	-0.1%	0.4%	0.9%	-0.8%	-1.2%
Share of Renewables <sup>3</sup> (%)	31%	27%	16%	17%	23%	36%	46%	-1.3%	-5.1%	0.2%	3.2%	4.6%	2.7%
<b>Industry (incl. non-energy use)</b>	<b>325</b>	<b>425</b>	<b>1 123</b>	<b>1 555</b>	<b>1 607</b>	<b>1 231</b>	<b>992</b>	<b>2.7%</b>	<b>10.2%</b>	<b>3.3%</b>	<b>0.3%</b>	<b>-2.6%</b>	<b>-2.1%</b>
Coal	238	269	708	800	644	281	168	1.2%	10.2%	1.2%	-2.1%	-7.9%	-5.0%
Oil	39	70	142	228	216	152	79	6.0%	7.4%	4.8%	-0.5%	-3.5%	-6.4%
Gas	8	9	28	78	144	168	97	1.2%	12.3%	10.9%	6.4%	1.5%	-5.3%
Electricity	30	59	203	387	505	502	526	7.2%	13.1%	6.7%	2.7%	0.0%	0.5%
Heat	11	19	42	59	71	82	88	5.9%	8.2%	3.4%	2.0%	1.4%	0.7%
Biomass & Other	0	0	0	4	27	45	34	n.s.	n.s.	n.s.	21.8%	5.3%	-2.8%
<b>Buildings</b>	<b>325</b>	<b>321</b>	<b>452</b>	<b>599</b>	<b>645</b>	<b>602</b>	<b>543</b>	<b>-0.1%</b>	<b>3.5%</b>	<b>2.9%</b>	<b>0.7%</b>	<b>-0.7%</b>	<b>-1.0%</b>
Coal	105	61	81	70	32	5	1	-5.3%	2.9%	-1.5%	-7.5%	-16.4%	-16.6%
Oil	7	19	33	60	60	37	13	10.9%	5.5%	6.1%	-0.1%	-4.6%	-10.2%
Gas	2	6	26	51	70	58	23	11.4%	15.9%	6.8%	3.3%	-1.9%	-9.0%
Electricity	8	24	82	161	225	286	340	12.2%	13.1%	7.0%	3.4%	2.4%	1.8%
Heat	3	9	31	56	70	90	92	13.4%	13.2%	6.2%	2.3%	2.5%	0.2%
Biomass & Other	200	202	199	202	187	125	74	0.1%	-0.2%	0.2%	-0.7%	-3.9%	-5.1%
<b>Agriculture</b>	<b>30</b>	<b>18</b>	<b>34</b>	<b>40</b>	<b>43</b>	<b>45</b>	<b>45</b>	<b>-4.8%</b>	<b>6.2%</b>	<b>1.7%</b>	<b>0.8%</b>	<b>0.4%</b>	<b>0.1%</b>
Coal	11	6	11	11	7	3	1	-6.8%	7.0%	-0.3%	-3.8%	-8.5%	-8.5%
Oil	15	8	14	19	18	11	7	-5.8%	5.6%	2.8%	-0.5%	-4.2%	-4.8%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	5.3%	0.6%	-2.2%	-2.7%
Electricity	4	5	8	10	13	16	18	2.2%	6.2%	1.7%	2.5%	2.3%	1.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	5	14	19	n.s.	n.s.	n.s.	32.3%	10.8%	2.8%
<b>Transport</b>	<b>35</b>	<b>89</b>	<b>209</b>	<b>384</b>	<b>479</b>	<b>481</b>	<b>384</b>	<b>9.7%</b>	<b>8.9%</b>	<b>6.3%</b>	<b>2.2%</b>	<b>0.0%</b>	<b>-2.2%</b>
Coal	11	5	3	3	2	2	1	-7.8%	-3.5%	-2.5%	-2.0%	-2.0%	-2.0%
Oil	24	83	194	358	438	412	259	13.2%	8.9%	6.3%	2.0%	-0.6%	-4.5%
Gas	0	0	7	13	12	13	18	n.s.	48.8%	5.8%	-0.3%	0.6%	3.7%
Electricity	1	1	3	7	16	28	44	9.6%	10.3%	8.0%	8.2%	5.6%	4.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	2	3	11	27	60	n.s.	n.s.	7.0%	12.6%	9.8%	8.4%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>59</b>	<b>120</b>	<b>288</b>	<b>465</b>	<b>465</b>	<b>331</b>	<b>296</b>	<b>7.3%</b>	<b>9.2%</b>	<b>4.9%</b>	<b>0.0%</b>	<b>-3.3%</b>	<b>-1.1%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

India	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	871	1 053	1 231	1 389	1 528	1 634	1 705	1.9%	1.6%	1.2%	1.0%	0.7%	0.4%
GDP per capita (ppp, k\$'05)	1	2	3	5	9	14	20	3.6%	5.9%	5.5%	5.7%	4.4%	3.5%
GDP per capita (mer, k\$'05)	0	1	1	2	3	5	7	3.6%	5.9%	5.8%	5.7%	4.4%	3.5%
Share Value Added - Agriculture (%)	29	23	18	15	13	12	12	-2.3%	-2.4%	-2.0%	-1.2%	-0.6%	-0.3%
Share Value Added - Industry (%)	26	26	28	26	23	20	16	-0.2%	0.6%	-0.7%	-1.0%	-1.7%	-2.1%
Share Value Added - Services (%)	44	51	54	60	64	68	72	1.4%	0.7%	0.9%	0.7%	0.7%	0.6%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	18	21	26	-7.8%	10.3%	-2.2%	1.3%	1.2%	2.4%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	28	24	47	43	46	38	32	-1.2%	6.8%	-0.9%	0.8%	-2.0%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	1 243	1 641	2 387	3 604	4 407	3 161	1 597	2.8%	3.8%	4.2%	2.0%	-3.3%	-6.6%
Total GHG (excl. sinks)	1 272	1 690	2 515	3 704	4 527	3 287	1 752	2.9%	4.1%	3.9%	2.0%	-3.2%	-6.1%
Total GHG (energy, industry, agriculture)	1 272	1 690	2 515	3 704	4 527	3 287	1 752	2.9%	4.1%	3.9%	2.0%	-3.2%	-6.1%
CO <sub>2</sub>	589	936	1 662	2 726	3 649	2 574	1 204	4.7%	5.9%	5.1%	3.0%	-3.4%	-7.3%
CH <sub>4</sub>	507	555	615	686	613	502	403	0.9%	1.0%	1.1%	-1.1%	-2.0%	-2.2%
N <sub>2</sub> O	166	188	220	262	253	194	125	1.3%	1.5%	1.8%	-0.4%	-2.6%	-4.3%
F gases	10	10	18	30	13	17	20	0.6%	5.8%	5.3%	-8.0%	2.8%	1.6%
Total GHG from Energy and Industry	791	1 172	1 974	3 105	3 980	2 878	1 480	4.0%	5.3%	4.6%	2.5%	-3.2%	-6.4%
CO <sub>2</sub> Emissions from Fuel Comb.	545	873	1 494	2 417	3 152	2 074	895	4.8%	5.5%	4.9%	2.7%	-4.1%	-8.1%
Power generation/District heating	233	462	792	1 216	1 622	721	-1	7.1%	5.5%	4.4%	2.9%	-7.8%	n.s.
Industry	126	151	296	560	716	582	339	1.8%	7.0%	6.6%	2.5%	-2.1%	-5.3%
Buildings	75	97	157	220	246	137	68	2.5%	5.0%	3.5%	1.1%	-5.7%	-6.8%
Agriculture	14	26	27	38	43	31	21	6.6%	0.5%	3.5%	1.2%	-3.2%	-3.9%
Transport	74	96	164	285	376	437	372	2.6%	5.5%	5.7%	2.8%	1.5%	-1.6%
Other	23	42	58	98	149	166	96	6.2%	3.3%	5.3%	4.3%	1.1%	-5.3%
CO <sub>2</sub> captured (CCS)	0	0	0	0	4	373	1 021	n.s.	n.s.	n.s.	n.s.	n.s.	10.6%
Coal	0	0	0	0	2	146	308	n.s.	n.s.	n.s.	n.s.	55.3%	7.7%
Gas	0	0	0	0	2	183	412	n.s.	n.s.	n.s.	n.s.	n.s.	8.4%
Biomass	0	0	0	0	0	43	301	n.s.	n.s.	n.s.	23.4%	n.s.	21.4%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	278	356	502	644	710	743	741	2.5%	3.5%	2.5%	1.0%	0.5%	0.0%
Coal	92	142	223	325	341	191	134	4.5%	4.6%	3.8%	0.5%	-5.7%	-3.5%
Oil	35	36	44	36	34	28	0	0.2%	2.0%	-1.9%	-0.6%	-1.8%	n.s.
Natural gas	10	22	42	49	42	37	33	8.1%	6.8%	1.5%	-1.4%	-1.4%	-1.2%
Biomass	133	145	173	188	194	237	239	0.8%	1.8%	0.9%	0.3%	2.0%	0.1%
Nuclear <sup>1</sup>	2	4	7	10	24	89	129	10.7%	4.4%	3.3%	9.6%	14.1%	3.7%
Hydro	6	6	11	15	18	20	21	0.4%	5.2%	3.7%	1.9%	1.1%	0.4%
Other renewables	0	0	3	22	56	141	184	32.6%	31.4%	22.8%	10.1%	9.6%	2.7%
Net Imports	32	83	191	431	721	718	647						
Coal	8	6	60	140	182	33	2						
Oil	23	76	118	225	281	299	254						
Natural gas	1	1	12	66	255	385	346						
Biomass	0	0	0	0	0	-3	33						
Biofuels	0	0	0	0	1	4	13						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	311	440	693	1 076	1 431	1 461	1 388	3.5%	4.7%	4.5%	2.9%	0.2%	-0.5%
Coal	100	148	283	465	524	223	136	4.0%	6.7%	5.1%	1.2%	-8.2%	-4.9%
Oil	59	112	162	261	315	327	254	6.7%	3.7%	4.9%	1.9%	0.4%	-2.5%
Natural gas	11	23	54	114	298	422	378	7.9%	9.0%	7.7%	10.0%	3.5%	-1.1%
Biomass	133	145	173	188	194	234	272	0.8%	1.8%	0.9%	0.3%	1.9%	1.5%
Nuclear <sup>1</sup>	2	4	7	10	24	89	129	10.7%	4.4%	3.3%	9.6%	14.1%	3.7%
Hydro	6	6	11	15	18	20	21	0.4%	5.2%	3.7%	1.9%	1.1%	0.4%
Other renewables	0	0	3	22	56	141	184	32.6%	31.4%	22.8%	10.1%	9.6%	2.7%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	311	440	693	1 076	1 431	1 461	1 388	3.5%	4.7%	4.5%	2.9%	0.2%	-0.5%
Energy for Power Generation	69	134	240	392	598	702	812	6.9%	6.0%	5.0%	4.3%	1.6%	1.5%
Other Energy Transformation & Losses	8	17	33	52	84	110	135	7.4%	6.8%	4.6%	5.0%	2.7%	2.1%
Final consumption	252	321	483	752	955	958	837	2.5%	4.2%	4.5%	2.4%	0.0%	-1.3%
Steel, Non-Met. Minerals and Chem.	24	38	72	168	213	169	103	4.5%	6.6%	8.9%	2.4%	-2.3%	-4.8%
Other Industry	47	49	86	133	185	186	147	0.3%	5.8%	4.5%	3.4%	0.0%	-2.3%
Non-Energy Use	14	30	37	58	73	72	54	7.7%	2.3%	4.6%	2.2%	0.0%	-3.0%
Residential	123	141	172	202	207	185	151	1.4%	2.0%	1.6%	0.3%	-1.1%	-2.0%
Services	14	16	33	49	82	104	129	1.6%	7.1%	4.1%	5.3%	2.4%	2.1%
Agriculture	9	15	19	30	37	44	49	6.0%	2.3%	4.4%	2.3%	1.6%	1.2%
Road	16	28	58	103	142	176	179	6.2%	7.4%	5.9%	3.3%	2.2%	0.2%
Rail	4	2	4	5	8	12	16	-6.1%	5.0%	4.2%	4.2%	3.6%	2.9%
Aviation	1	1	2	3	6	9	9	3.0%	8.5%	7.2%	6.5%	3.8%	0.3%
Other Transport	1	1	1	1	2	2	2	-0.5%	4.4%	2.5%	5.6%	1.6%	-0.7%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

India	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>61</b>	<b>122</b>	<b>220</b>	<b>345</b>	<b>499</b>	<b>451</b>	<b>477</b>	<b>7.2%</b>	<b>6.0%</b>	<b>4.6%</b>	<b>3.8%</b>	<b>-1.0%</b>	<b>0.6%</b>
Coal	52	104	177	272	320	121	84	7.0%	5.5%	4.4%	1.6%	-9.3%	-3.6%
Oil	5	9	7	11	21	29	17	6.0%	-1.9%	4.1%	6.4%	3.4%	-4.8%
Gas	3	9	27	41	122	204	212	10.3%	11.1%	4.5%	11.4%	5.3%	0.4%
Biomass & Waste	0	1	8	21	37	98	164	n.s.	27.3%	9.7%	5.9%	10.3%	5.3%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>293</b>	<b>570</b>	<b>988</b>	<b>1 825</b>	<b>2 947</b>	<b>4 006</b>	<b>5 174</b>	<b>6.9%</b>	<b>5.7%</b>	<b>6.3%</b>	<b>4.9%</b>	<b>3.1%</b>	<b>2.6%</b>
Coal	192	390	658	1 067	1 309	521	400	7.4%	5.4%	5.0%	2.1%	-8.8%	-2.6%
of which CCS	0	0	0	0	2	144	319	n.s.	n.s.	n.s.	n.s.	52.0%	8.3%
Oil	13	29	24	47	88	124	76	8.2%	-1.8%	6.8%	6.4%	3.5%	-4.8%
Gas	10	56	113	187	555	1 069	1 283	18.8%	7.3%	5.1%	11.5%	6.8%	1.8%
of which CCS	0	0	0	0	4	477	1 075	n.s.	n.s.	n.s.	n.s.	n.s.	8.5%
Biomass & Waste	0	1	15	65	125	414	750	n.s.	27.6%	16.0%	6.8%	12.7%	6.1%
of which CCS	0	0	0	0	0	49	312	n.s.	n.s.	n.s.	n.s.	n.s.	20.4%
Nuclear	6	17	26	37	96	366	530	10.7%	4.5%	3.4%	10.1%	14.4%	3.8%
Hydro	72	74	123	177	212	238	247	0.4%	5.2%	3.7%	1.9%	1.1%	0.4%
Wind	0	2	29	141	295	833	1 200	48.6%	32.8%	17.3%	7.7%	10.9%	3.7%
Solar	0	0	0	104	266	436	658	8.8%	31.7%	n.s.	9.8%	5.1%	4.2%
Other	0	0	0	0	1	6	29	n.s.	n.s.	n.s.	34.6%	21.9%	17.4%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>78</b>	<b>123</b>	<b>215</b>	<b>480</b>	<b>774</b>	<b>1 242</b>	<b>1 518</b>	<b>4.6%</b>	<b>5.8%</b>	<b>8.4%</b>	<b>4.9%</b>	<b>4.8%</b>	<b>2.0%</b>
Coal	52	79	131	223	273	245	103	4.3%	5.2%	5.5%	2.0%	-1.1%	-8.3%
of which CCS	0	0	0	0	0	19	43	n.s.	n.s.	n.s.	n.s.	52.0%	8.5%
Oil	3	5	5	10	13	19	20	5.9%	-1.2%	7.7%	2.9%	3.9%	0.3%
Gas	3	10	21	45	91	173	239	11.4%	7.5%	7.9%	7.3%	6.6%	3.3%
of which CCS	0	0	0	0	0	62	160	n.s.	n.s.	n.s.	n.s.	n.s.	10.0%
Biomass & Waste	0	1	3	14	18	57	102	n.s.	14.6%	15.0%	2.5%	12.4%	6.0%
of which CCS	0	0	0	0	0	6	41	n.s.	n.s.	n.s.	n.s.	n.s.	20.4%
Nuclear	1	3	4	5	14	51	73	8.2%	4.9%	2.5%	9.8%	14.1%	3.6%
Hydro	19	24	37	53	64	72	74	2.3%	4.7%	3.6%	1.9%	1.1%	0.4%
Wind	0	1	13	61	125	346	492	44.9%	27.1%	16.3%	7.5%	10.7%	3.6%
Solar	0	0	0	69	176	280	412	8.8%	22.2%	n.s.	9.9%	4.7%	3.9%
Other	0	0	0	0	0	1	4	n.s.	n.s.	n.s.	33.8%	21.3%	16.8%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>252</b>	<b>321</b>	<b>483</b>	<b>752</b>	<b>955</b>	<b>958</b>	<b>837</b>	<b>2.5%</b>	<b>4.2%</b>	<b>4.5%</b>	<b>2.4%</b>	<b>0.0%</b>	<b>-1.3%</b>
Coal	44	41	99	177	184	88	42	-0.8%	9.4%	6.0%	0.4%	-7.2%	-7.1%
Oil	50	94	134	225	264	267	212	6.6%	3.6%	5.3%	1.6%	0.1%	-2.3%
Gas	6	10	22	63	150	177	122	5.1%	8.6%	11.0%	9.1%	1.7%	-3.7%
Electricity	18	32	62	119	193	262	336	5.8%	6.8%	6.6%	5.0%	3.1%	2.5%
Heat	0	0	0	0	8	32	24	16.5%	23.5%	5.3%	32.6%	14.3%	-2.5%
Biomass & Other	133	144	165	168	156	133	101	0.8%	1.3%	0.2%	-0.8%	-1.6%	-2.6%
Share of Renewables <sup>3</sup> (%)	57%	49%	38%	28%	25%	35%	45%	-1.5%	-2.5%	-2.9%	-1.1%	3.1%	2.7%
<b>Industry (incl. non-energy use)</b>	<b>86</b>	<b>116</b>	<b>194</b>	<b>359</b>	<b>470</b>	<b>427</b>	<b>303</b>	<b>3.1%</b>	<b>5.3%</b>	<b>6.3%</b>	<b>2.8%</b>	<b>-1.0%</b>	<b>-3.3%</b>
Coal	32	32	84	161	169	84	41	0.0%	10.1%	6.8%	0.5%	-6.8%	-6.8%
Oil	17	36	37	65	73	75	60	8.1%	0.2%	5.8%	1.2%	0.3%	-2.2%
Gas	6	9	17	49	114	145	98	4.8%	6.6%	10.8%	8.9%	2.4%	-3.8%
Electricity	9	14	28	49	71	80	86	4.1%	7.3%	6.0%	3.7%	1.3%	0.7%
Heat	0	0	0	0	0	0	0	n.s.	23.5%	3.9%	-0.2%	-0.3%	-0.2%
Biomass & Other	23	26	29	35	43	42	17	1.3%	1.3%	1.9%	2.0%	-0.2%	-8.4%
<b>Buildings</b>	<b>137</b>	<b>158</b>	<b>205</b>	<b>250</b>	<b>289</b>	<b>289</b>	<b>280</b>	<b>1.4%</b>	<b>2.6%</b>	<b>2.0%</b>	<b>1.5%</b>	<b>0.0%</b>	<b>-0.3%</b>
Coal	10	9	16	16	15	4	1	-1.4%	5.9%	0.5%	-1.0%	-12.7%	-15.0%
Oil	11	19	27	39	36	19	9	5.7%	3.6%	3.7%	-0.9%	-6.0%	-7.5%
Gas	0	0	3	13	31	26	16	21.0%	27.7%	14.9%	9.4%	-1.9%	-4.9%
Electricity	5	11	23	49	92	138	191	8.5%	7.8%	7.9%	6.5%	4.1%	3.3%
Heat	0	0	0	0	8	32	24	16.5%	23.5%	5.4%	33.3%	14.4%	-2.5%
Biomass & Other	111	119	136	132	107	71	39	0.7%	1.3%	-0.2%	-2.1%	-4.1%	-5.7%
<b>Agriculture</b>	<b>9</b>	<b>15</b>	<b>19</b>	<b>30</b>	<b>37</b>	<b>44</b>	<b>49</b>	<b>6.0%</b>	<b>2.3%</b>	<b>4.4%</b>	<b>2.3%</b>	<b>1.6%</b>	<b>1.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	4	8	8	12	13	10	6	6.6%	0.4%	3.6%	1.2%	-3.2%	-3.9%
Gas	0	0	0	0	0	0	0	5.4%	2.7%	1.6%	1.2%	-2.0%	-2.6%
Electricity	4	7	11	18	23	28	34	5.3%	4.1%	5.1%	2.5%	2.1%	1.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	6	9	n.s.	n.s.	n.s.	n.s.	19.6%	4.6%
<b>Transport</b>	<b>21</b>	<b>32</b>	<b>64</b>	<b>113</b>	<b>158</b>	<b>199</b>	<b>206</b>	<b>4.4%</b>	<b>7.2%</b>	<b>5.8%</b>	<b>3.4%</b>	<b>2.3%</b>	<b>0.3%</b>
Coal	2	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	18	31	62	108	141	162	136	5.5%	7.1%	5.8%	2.7%	1.4%	-1.8%
Gas	0	0	1	1	4	6	8	n.s.	33.6%	-0.6%	10.8%	5.3%	2.4%
Electricity	0	1	1	3	8	16	26	7.2%	5.0%	8.8%	11.2%	7.4%	5.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	5	15	36	n.s.	-0.7%	19.8%	29.5%	10.5%	9.5%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>8</b>	<b>17</b>	<b>33</b>	<b>52</b>	<b>84</b>	<b>110</b>	<b>135</b>	<b>7.4%</b>	<b>6.8%</b>	<b>4.6%</b>	<b>5.0%</b>	<b>2.7%</b>	<b>2.1%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

GECO2016 2°C	SUMMARY GHG & ENERGY BALANCE
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Indonesia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	181	212	242	272	295	312	322	1.5%	1.3%	1.2%	0.8%	0.6%	0.3%
GDP per capita (ppp, k\$'05)	2	3	4	6	9	13	18	2.6%	3.8%	4.4%	4.4%	3.5%	3.2%
GDP per capita (mer, k\$'05)	1	1	2	2	4	5	7	2.6%	3.8%	4.3%	4.4%	3.5%	3.2%
Share Value Added - Agriculture (%)	19	16	15	13	11	11	10	-2.2%	-0.2%	-1.9%	-1.2%	-0.6%	-0.4%
Share Value Added - Industry (%)	39	46	47	47	46	44	40	1.6%	0.2%	0.1%	-0.2%	-0.5%	-0.8%
Share Value Added - Services (%)	41	38	38	40	42	46	49	-0.7%	-0.2%	0.6%	0.6%	0.7%	0.8%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	18	21	26	-7.8%	10.3%	-2.2%	1.3%	1.2%	2.4%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	28	24	47	43	46	38	32	-1.2%	6.8%	-0.9%	0.8%	-2.0%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	1 008	1 338	1 927	1 919	1 423	1 106	834	2.9%	3.7%	0.0%	-2.9%	-2.5%	-2.8%
Total GHG (excl. sinks)	1 344	1 585	1 927	1 919	1 423	1 106	853	1.7%	2.0%	0.0%	-2.9%	-2.5%	-2.6%
Total GHG (energy, industry, agriculture)	388	524	709	902	971	708	318	3.1%	3.1%	2.4%	0.7%	-3.1%	-7.7%
CO <sub>2</sub>	169	304	422	567	685	491	166	6.0%	3.3%	3.0%	1.9%	-3.3%	-10.3%
CH <sub>4</sub>	141	158	214	244	200	147	109	1.1%	3.1%	1.3%	-1.9%	-3.0%	-3.0%
N <sub>2</sub> O	76	62	73	89	84	69	41	-2.0%	1.5%	2.1%	-0.6%	-2.0%	-5.0%
F gases	2	0	1	2	2	1	1	-12.9%	6.3%	8.3%	2.0%	-5.7%	-2.3%
Total GHG from Energy and Industry	259	398	556	726	816	591	245	4.4%	3.4%	2.7%	1.2%	-3.2%	-8.4%
CO <sub>2</sub> Emissions from Fuel Comb.	149	278	390	521	624	431	129	6.5%	3.5%	2.9%	1.8%	-3.6%	-11.4%
Power generation/District heating	22	61	122	165	175	62	-42	10.7%	7.1%	3.1%	0.6%	-9.9%	n.s.
Industry	39	72	102	129	184	139	43	6.3%	3.6%	2.4%	3.6%	-2.7%	-11.2%
Buildings	21	37	24	32	34	18	7	6.0%	-4.3%	2.8%	0.8%	-6.1%	-9.8%
Agriculture	3	8	9	9	10	8	5	9.3%	2.0%	0.0%	1.3%	-3.0%	-3.6%
Transport	32	64	92	143	156	155	111	7.0%	3.8%	4.5%	0.9%	-0.1%	-3.2%
Other	31	36	41	43	64	49	5	1.5%	1.2%	0.5%	4.0%	-2.6%	-20.6%
CO <sub>2</sub> captured (CCS)	0	0	0	0	2	89	221	n.s.	n.s.	n.s.	n.s.	44.3%	9.5%
Coal	0	0	0	0	1	35	46	n.s.	n.s.	n.s.	n.s.	41.8%	2.5%
Gas	0	0	0	0	1	32	54	n.s.	n.s.	n.s.	n.s.	39.6%	5.3%
Biomass	0	0	0	0	0	21	121	n.s.	n.s.	n.s.	n.s.	n.s.	19.1%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	162	232	378	487	344	286	240	3.7%	5.0%	2.6%	-3.4%	-1.8%	-1.7%
Coal	6	49	195	283	89	18	1	22.5%	14.9%	3.8%	-10.9%	-14.7%	-23.8%
Oil	76	72	49	42	47	36	0	-0.6%	-3.7%	-1.6%	1.1%	-2.6%	-38.2%
Natural gas	36	57	71	80	104	91	59	4.6%	2.1%	1.2%	2.7%	-1.4%	-4.2%
Biomass	42	49	52	62	71	93	125	1.6%	0.6%	1.7%	1.3%	2.7%	3.0%
Nuclear <sup>1</sup>	0	0	0	0	0	2	3	n.s.	n.s.	n.s.	n.s.	n.s.	3.6%
Hydro	0	1	2	1	2	2	3	5.8%	5.7%	-1.3%	1.7%	3.8%	3.0%
Other renewables	1	4	8	18	31	45	49	15.8%	6.9%	8.2%	5.7%	3.6%	0.8%
Net Imports	- 65	- 82	- 177	- 223	- 18	36	59						
Coal	- 2	- 37	- 165	- 252	- 62	0	12						
Oil	- 42	- 14	21	47	50	53	61						
Natural gas	- 22	- 31	- 32	- 17	2	- 1	- 3						
Biomass	0	0	0	0	- 7	- 16	- 13						
Biofuels	0	0	0	- 1	- 1	0	1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	97	151	201	263	327	322	299	4.5%	2.9%	2.7%	2.2%	-0.1%	-0.8%
Coal	4	12	30	31	27	18	14	10.4%	9.8%	0.2%	-1.2%	-4.0%	-2.9%
Oil	34	58	70	89	97	89	62	5.3%	1.9%	2.4%	0.9%	-0.9%	-3.6%
Natural gas	15	27	39	63	106	90	56	6.1%	3.9%	5.0%	5.3%	-1.7%	-4.6%
Biomass	42	49	52	62	64	77	112	1.6%	0.6%	1.7%	0.3%	1.9%	3.8%
Nuclear <sup>1</sup>	0	0	0	0	0	2	3	n.s.	n.s.	n.s.	n.s.	n.s.	3.6%
Hydro	0	1	2	1	2	2	3	5.8%	5.7%	-1.3%	1.7%	3.8%	3.0%
Other renewables	1	4	8	18	31	45	49	15.8%	6.9%	8.2%	5.7%	3.6%	0.8%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	97	151	201	263	327	322	299	4.5%	2.9%	2.7%	2.2%	-0.1%	-0.8%
Energy for Power Generation	8	24	46	72	95	108	122	11.7%	6.7%	4.5%	2.8%	1.2%	1.3%
Other Energy Transformation & Losses	12	13	19	10	20	21	31	0.5%	4.0%	-6.3%	7.4%	0.3%	4.2%
Final consumption	79	121	149	203	242	237	204	4.3%	2.1%	3.2%	1.8%	-0.2%	-1.5%
Steel, Non-Met. Minerals and Chem.	3	5	9	17	28	20	12	6.3%	5.9%	6.5%	4.7%	-3.2%	-4.7%
Other Industry	15	25	32	36	47	46	37	5.2%	2.3%	1.3%	2.7%	-0.4%	-2.1%
Non-Energy Use	7	10	8	14	18	18	14	2.9%	-1.4%	5.2%	2.2%	0.1%	-2.1%
Residential	42	53	56	70	73	70	61	2.4%	0.6%	2.2%	0.5%	-0.4%	-1.4%
Services	1	4	5	8	12	15	18	13.2%	3.2%	4.6%	4.3%	2.5%	1.9%
Agriculture	1	2	3	3	4	4	5	9.3%	2.0%	0.0%	2.1%	1.4%	0.9%
Road	9	19	31	48	52	55	49	7.4%	4.9%	4.5%	0.8%	0.4%	-1.1%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Aviation	0	1	2	4	5	5	4	7.4%	14.1%	4.8%	2.7%	0.9%	-1.5%
Other Transport	1	2	2	3	4	4	3	7.9%	2.0%	4.6%	3.2%	-0.2%	-2.0%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%



Indonesia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>7</b>	<b>19</b>	<b>37</b>	<b>53</b>	<b>62</b>	<b>59</b>	<b>67</b>	<b>11.3%</b>	<b>6.7%</b>	<b>3.7%</b>	<b>1.7%</b>	<b>-0.6%</b>	<b>1.4%</b>
Coal	2	8	19	26	21	15	13	13.7%	8.4%	3.4%	-2.2%	-3.7%	-1.3%
Oil	4	5	8	3	4	3	2	1.5%	6.3%	-9.4%	3.1%	-3.5%	-2.6%
Gas	0	6	9	22	34	31	27	39.3%	4.1%	9.6%	4.6%	-0.8%	-1.3%
Biomass & Waste	0	0	0	0	0	0	7	n.s.	31.5%	14.5%	12.2%	30.0%	12.5%
Other	0	0	1	2	3	3	3	15.8%	6.8%	6.8%	5.4%	1.9%	0.5%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>33</b>	<b>93</b>	<b>170</b>	<b>274</b>	<b>363</b>	<b>438</b>	<b>538</b>	<b>11.1%</b>	<b>6.2%</b>	<b>4.9%</b>	<b>2.9%</b>	<b>1.9%</b>	<b>2.1%</b>
Coal	10	34	68	110	97	70	61	13.3%	7.2%	4.9%	-1.2%	-3.3%	-1.3%
of which CCS	0	0	0	0	1	40	49	n.s.	n.s.	n.s.	n.s.	40.3%	2.1%
Oil	15	18	34	13	18	13	10	1.8%	6.4%	-9.1%	3.1%	-3.3%	-2.5%
Gas	1	26	40	92	161	167	161	42.9%	4.4%	8.7%	5.7%	0.4%	-0.4%
of which CCS	0	0	0	0	1	74	130	n.s.	n.s.	n.s.	n.s.	50.4%	5.8%
Biomass & Waste	0	0	0	1	2	32	109	n.s.	31.5%	18.9%	15.1%	31.1%	12.9%
of which CCS	0	0	0	0	0	23	94	n.s.	n.s.	n.s.	n.s.	n.s.	15.0%
Nuclear	0	0	0	0	0	8	12	n.s.	n.s.	n.s.	n.s.	n.s.	3.6%
Hydro	6	10	17	15	18	26	35	5.8%	5.7%	-1.3%	1.7%	3.8%	3.0%
Wind	0	0	0	22	29	47	55	n.s.	n.s.	n.s.	2.7%	5.0%	1.6%
Solar	0	0	0	2	7	37	53	n.s.	n.s.	n.s.	13.6%	18.4%	3.5%
Other	1	5	9	18	31	38	43	15.8%	6.8%	6.8%	5.5%	2.1%	1.3%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>13</b>	<b>25</b>	<b>34</b>	<b>70</b>	<b>93</b>	<b>126</b>	<b>142</b>	<b>6.9%</b>	<b>3.0%</b>	<b>7.5%</b>	<b>2.8%</b>	<b>3.1%</b>	<b>1.2%</b>
Coal	2	8	13	29	33	24	11	16.1%	5.4%	8.5%	1.3%	-3.0%	-7.6%
of which CCS	0	0	0	0	0	6	7	n.s.	n.s.	n.s.	n.s.	41.2%	2.1%
Oil	7	5	6	6	5	3	3	-4.6%	2.2%	1.2%	-1.9%	-6.5%	0.2%
Gas	1	8	10	16	26	30	27	32.6%	2.1%	4.8%	4.7%	1.4%	-1.0%
of which CCS	0	0	0	0	0	9	17	n.s.	n.s.	n.s.	n.s.	50.7%	5.8%
Biomass & Waste	0	0	0	0	0	4	15	n.s.	31.2%	1.5%	15.0%	31.3%	12.7%
of which CCS	0	0	0	0	0	3	13	n.s.	n.s.	n.s.	n.s.	n.s.	14.9%
Nuclear	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	n.s.	3.4%
Hydro	3	4	4	5	7	14	22	2.9%	-1.2%	3.0%	3.4%	7.0%	4.8%
Wind	0	0	0	9	12	19	22	n.s.	n.s.	n.s.	2.6%	5.1%	1.5%
Solar	0	0	0	1	5	25	35	n.s.	n.s.	n.s.	13.6%	18.3%	3.3%
Other	0	0	1	3	4	5	6	9.9%	12.7%	7.8%	5.4%	0.9%	1.9%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>79</b>	<b>121</b>	<b>149</b>	<b>203</b>	<b>242</b>	<b>237</b>	<b>204</b>	<b>4.3%</b>	<b>2.1%</b>	<b>3.2%</b>	<b>1.8%</b>	<b>-0.2%</b>	<b>-1.5%</b>
Coal	2	5	8	6	8	5	3	8.1%	5.9%	-2.5%	2.1%	-3.7%	-7.0%
Oil	27	48	60	85	93	86	61	6.0%	2.3%	3.5%	0.9%	-0.8%	-3.4%
Gas	6	12	16	31	52	41	17	6.7%	3.2%	6.8%	5.4%	-2.4%	-8.4%
Electricity	2	7	13	21	27	33	41	10.8%	6.5%	4.9%	2.9%	2.0%	2.0%
Heat	0	0	0	0	2	5	6	n.s.	n.s.	n.s.	15.8%	12.1%	0.1%
Biomass & Other	42	49	51	60	61	66	78	1.6%	0.4%	1.5%	0.2%	0.8%	1.7%
Share of Renewables <sup>3</sup> (%)	59%	45%	38%	34%	31%	40%	62%	-2.6%	-1.7%	-1.1%	-1.0%	2.7%	4.5%
<b>Industry (incl. non-energy use)</b>	<b>25</b>	<b>40</b>	<b>50</b>	<b>68</b>	<b>93</b>	<b>83</b>	<b>64</b>	<b>4.7%</b>	<b>2.1%</b>	<b>3.2%</b>	<b>3.2%</b>	<b>-1.0%</b>	<b>-2.6%</b>
Coal	2	5	8	6	8	5	3	8.0%	5.9%	-2.5%	2.1%	-3.7%	-7.0%
Oil	9	13	15	20	26	24	17	3.8%	1.6%	3.1%	2.4%	-0.8%	-3.0%
Gas	6	11	16	28	44	35	14	6.7%	3.2%	6.0%	4.7%	-2.2%	-8.9%
Electricity	1	3	4	7	9	9	10	8.9%	4.2%	4.8%	2.4%	0.4%	0.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	7	9	6	6	6	10	20	1.8%	-3.0%	-0.3%	-0.4%	5.1%	7.6%
<b>Buildings</b>	<b>43</b>	<b>56</b>	<b>61</b>	<b>77</b>	<b>85</b>	<b>85</b>	<b>79</b>	<b>2.8%</b>	<b>0.8%</b>	<b>2.4%</b>	<b>1.0%</b>	<b>0.0%</b>	<b>-0.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	7	12	7	8	6	3	1	5.9%	-4.4%	0.8%	-3.4%	-7.7%	-10.7%
Gas	0	0	0	3	7	4	2	8.1%	14.4%	32.5%	10.6%	-4.6%	-9.1%
Electricity	1	4	8	13	18	22	28	12.6%	7.9%	4.9%	2.8%	2.3%	2.4%
Heat	0	0	0	0	2	5	6	n.s.	n.s.	n.s.	15.8%	12.1%	0.1%
Biomass & Other	35	41	45	53	53	51	43	1.6%	1.0%	1.6%	0.0%	-0.4%	-1.7%
<b>Agriculture</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>9.3%</b>	<b>2.0%</b>	<b>0.0%</b>	<b>2.1%</b>	<b>1.4%</b>	<b>0.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	2	3	3	3	2	2	9.3%	2.0%	0.0%	1.3%	-3.0%	-3.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	16.9%	6.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	19.6%	5.1%
<b>Transport</b>	<b>11</b>	<b>21</b>	<b>35</b>	<b>55</b>	<b>61</b>	<b>64</b>	<b>57</b>	<b>7.4%</b>	<b>5.1%</b>	<b>4.5%</b>	<b>1.1%</b>	<b>0.4%</b>	<b>-1.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	11	21	35	54	58	58	41	7.4%	5.0%	4.4%	0.7%	-0.1%	-3.4%
Gas	0	0	0	0	1	1	1	n.s.	-6.6%	30.2%	17.4%	4.0%	3.1%
Electricity	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	56.4%	10.2%	5.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	2	4	12	n.s.	n.s.	15.4%	9.2%	8.7%	12.1%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>12</b>	<b>13</b>	<b>19</b>	<b>10</b>	<b>20</b>	<b>21</b>	<b>31</b>	<b>0.5%</b>	<b>4.0%</b>	<b>-6.3%</b>	<b>7.4%</b>	<b>0.3%</b>	<b>4.2%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Malaysia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	18	23	28	32	36	39	41	2.5%	1.8%	1.4%	1.1%	0.7%	0.5%
GDP per capita (ppp, k\$'05)	7	11	14	20	27	36	46	4.4%	2.7%	3.6%	3.3%	2.8%	2.5%
GDP per capita (mer, k\$'05)	3	5	6	9	12	17	21	4.4%	2.7%	3.6%	3.3%	2.8%	2.5%
Share Value Added - Agriculture (%)	14	9	10	10	9	9	9	-3.8%	1.1%	-0.5%	-0.3%	-0.2%	-0.1%
Share Value Added - Industry (%)	36	39	37	33	29	24	20	0.8%	-0.6%	-1.1%	-1.4%	-1.7%	-2.0%
Share Value Added - Services (%)	50	51	53	57	62	66	71	0.2%	0.2%	0.8%	0.8%	0.7%	0.6%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	18	21	26	-7.8%	10.3%	-2.2%	1.3%	1.2%	2.4%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	28	24	47	43	46	38	32	-1.2%	6.8%	-0.9%	0.8%	-2.0%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	- 153	- 51	408	475	422	291	200	n.s.	n.s.	1.5%	-1.2%	-3.6%	-3.7%
Total GHG (excl. sinks)	127	217	408	475	422	293	209	5.5%	6.5%	1.5%	-1.2%	-3.6%	-3.3%
Total GHG (energy, industry, agriculture)	91	171	262	330	318	197	73	6.4%	4.4%	2.4%	-0.4%	-4.7%	-9.4%
CO <sub>2</sub>	64	133	215	278	276	174	60	7.6%	4.9%	2.6%	0.0%	-4.5%	-10.0%
CH <sub>4</sub>	18	28	33	35	27	12	7	4.4%	1.7%	0.7%	-2.7%	-7.5%	-6.0%
N <sub>2</sub> O	9	9	13	16	13	11	5	0.1%	3.3%	2.1%	-1.5%	-2.3%	-6.5%
F gases	1	1	1	2	1	1	1	0.7%	7.1%	2.0%	-4.4%	-4.2%	-0.2%
Total GHG from Energy and Industry	79	158	246	312	302	185	67	7.2%	4.5%	2.4%	-0.3%	-4.8%	-9.6%
CO <sub>2</sub> Emissions from Fuel Comb.	59	122	196	252	248	151	50	7.6%	4.8%	2.6%	-0.2%	-4.8%	-10.5%
Power generation/District heating	16	37	96	117	104	36	-13	9.1%	9.9%	2.0%	-1.1%	-10.2%	n.s.
Industry	15	29	31	47	45	29	11	6.7%	0.9%	4.0%	-0.2%	-4.4%	-9.7%
Buildings	2	4	6	6	8	5	2	7.0%	3.6%	-0.5%	2.8%	-3.9%	-10.6%
Agriculture	0	0	3	4	4	2	2	n.s.	25.9%	0.7%	-0.1%	-3.6%	-3.9%
Transport	15	31	40	52	52	51	37	7.9%	2.6%	2.5%	0.1%	-0.3%	-3.0%
Other	11	20	19	28	35	28	12	6.0%	-0.9%	4.1%	2.2%	-2.2%	-8.3%
CO <sub>2</sub> captured (CCS)	0	0	0	0	4	44	90	n.s.	n.s.	n.s.	n.s.	26.2%	7.4%
Coal	0	0	0	0	2	13	16	n.s.	n.s.	n.s.	n.s.	21.8%	1.9%
Gas	0	0	0	0	2	24	36	n.s.	n.s.	n.s.	n.s.	25.3%	4.2%
Biomass	0	0	0	0	0	8	39	n.s.	n.s.	n.s.	n.s.	n.s.	17.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	47	77	92	124	138	89	85	5.0%	1.8%	3.0%	1.1%	-4.2%	-0.5%
Coal	0	0	2	2	2	1	1	14.0%	19.6%	2.9%	-0.5%	-4.1%	-4.3%
Oil	31	36	35	51	43	1	0	1.5%	-0.1%	3.7%	-1.7%	-31.3%	n.s.
Natural gas	14	38	52	63	78	58	41	10.4%	3.0%	2.0%	2.1%	-2.8%	-3.5%
Biomass	1	2	2	6	12	21	33	1.8%	2.2%	11.1%	6.5%	6.0%	4.4%
Nuclear <sup>1</sup>	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	12.1%	4.5%
Hydro	0	1	1	1	2	2	2	5.7%	-0.7%	8.9%	1.5%	2.0%	0.9%
Other renewables	0	0	0	0	1	4	7	n.s.	n.s.	n.s.	19.9%	13.9%	4.5%
Net Imports	- 25	- 28	- 16	- 25	- 30	12	13						
Coal	1	2	13	20	13	7	4						
Oil	- 18	- 16	- 9	- 16	- 9	30	22						
Natural gas	- 7	- 14	- 21	- 27	- 29	- 18	- 10						
Biomass	0	0	0	- 3	- 6	- 7	- 4						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	22	49	75	98	108	101	98	8.2%	4.4%	2.7%	0.9%	-0.6%	-0.3%
Coal	1	2	15	22	15	8	5	5.7%	20.3%	4.2%	-3.5%	-6.0%	-4.6%
Oil	12	19	27	35	34	31	22	4.7%	3.3%	2.6%	-0.2%	-1.0%	-3.2%
Natural gas	7	25	31	36	49	40	31	13.6%	2.4%	1.5%	3.1%	-1.9%	-2.7%
Biomass	1	2	2	4	6	14	28	1.8%	2.2%	5.6%	4.8%	8.9%	7.1%
Nuclear <sup>1</sup>	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	12.1%	4.5%
Hydro	0	1	1	1	2	2	2	5.7%	-0.7%	8.9%	1.5%	2.0%	0.9%
Other renewables	0	0	0	0	1	4	7	n.s.	n.s.	n.s.	19.9%	13.9%	4.5%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	22	49	75	98	108	101	98	8.2%	4.4%	2.7%	0.9%	-0.6%	-0.3%
Energy for Power Generation	5	15	33	38	42	40	44	10.8%	8.0%	1.6%	0.8%	-0.4%	1.0%
Other Energy Transformation & Losses	5	9	8	13	17	16	20	6.7%	-0.8%	4.6%	2.6%	-0.3%	2.2%
Final consumption	14	30	44	61	66	65	61	8.0%	4.0%	3.3%	0.9%	-0.2%	-0.8%
Steel, Non-Met. Minerals and Chem.	0	0	0	0	1	2	2	n.s.	n.s.	n.s.	16.4%	5.8%	-0.5%
Other Industry	5	12	13	18	19	15	12	7.9%	1.3%	3.1%	0.2%	-2.0%	-2.1%
Non-Energy Use	1	2	6	11	11	9	6	10.4%	11.0%	6.0%	-0.1%	-1.7%	-3.5%
Residential	2	3	4	5	6	6	6	4.2%	3.5%	2.1%	1.3%	0.5%	0.0%
Services	1	2	4	6	8	11	13	10.9%	6.9%	3.2%	3.7%	2.3%	2.0%
Agriculture	0	0	1	1	1	2	2	n.s.	26.2%	0.9%	1.8%	1.2%	0.9%
Road	5	11	15	19	19	20	19	8.5%	3.3%	2.7%	0.3%	0.3%	-0.7%
Rail	0	0	0	0	0	0	0	n.s.	15.1%	4.8%	3.2%	2.5%	2.0%
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other Transport	0	0	0	0	0	0	0	-20.8%	11.6%	-6.5%	2.0%	-1.4%	-2.3%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Malaysia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>5</b>	<b>15</b>	<b>32</b>	<b>37</b>	<b>39</b>	<b>33</b>	<b>34</b>	<b>11.1%</b>	<b>8.2%</b>	<b>1.4%</b>	<b>0.4%</b>	<b>-1.6%</b>	<b>0.3%</b>
Coal	1	1	13	19	13	7	4	6.3%	24.1%	4.1%	-4.1%	-6.0%	-4.2%
Oil	3	1	1	1	1	1	1	-10.6%	-2.5%	4.7%	2.1%	-0.5%	-4.2%
Gas	1	12	18	15	23	19	17	24.4%	4.1%	-1.5%	3.9%	-1.6%	-1.1%
Biomass & Waste	0	0	0	1	2	5	11	n.s.	n.s.	11.1%	5.3%	12.0%	7.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>23</b>	<b>69</b>	<b>125</b>	<b>181</b>	<b>218</b>	<b>242</b>	<b>286</b>	<b>11.6%</b>	<b>6.1%</b>	<b>3.8%</b>	<b>1.9%</b>	<b>1.1%</b>	<b>1.7%</b>
Coal	3	8	43	82	57	32	21	10.1%	18.7%	6.7%	-3.5%	-5.5%	-4.1%
of which CCS	0	0	0	0	2	14	17	n.s.	n.s.	n.s.	n.s.	20.6%	2.0%
Oil	11	4	4	5	6	6	4	-10.2%	0.2%	2.9%	2.1%	-0.5%	-3.9%
Gas	6	51	71	74	116	108	107	24.9%	3.3%	0.4%	4.6%	-0.7%	-0.2%
of which CCS	0	0	0	0	7	63	95	n.s.	n.s.	n.s.	n.s.	24.7%	4.2%
Biomass & Waste	0	0	1	3	6	23	52	n.s.	n.s.	11.1%	7.6%	14.1%	8.8%
of which CCS	0	0	0	0	0	8	32	n.s.	n.s.	n.s.	n.s.	n.s.	15.6%
Nuclear	0	0	0	0	2	5	7	n.s.	n.s.	n.s.	n.s.	12.1%	4.5%
Hydro	4	7	6	15	18	22	24	5.7%	-0.7%	8.9%	1.5%	2.0%	0.9%
Wind	0	0	0	0	5	18	35	n.s.	n.s.	n.s.	28.1%	13.6%	6.5%
Solar	0	0	0	2	8	27	33	n.s.	n.s.	n.s.	16.7%	12.8%	1.9%
Other	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	31.2%	23.1%	18.3%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>5</b>	<b>14</b>	<b>27</b>	<b>41</b>	<b>52</b>	<b>71</b>	<b>82</b>	<b>11.4%</b>	<b>7.0%</b>	<b>4.3%</b>	<b>2.3%</b>	<b>3.2%</b>	<b>1.4%</b>
Coal	1	1	8	13	13	12	7	0.8%	19.4%	5.2%	0.4%	-0.6%	-5.9%
of which CCS	0	0	0	0	0	2	2	n.s.	n.s.	n.s.	n.s.	20.7%	2.2%
Oil	1	2	2	2	1	1	1	4.7%	-3.6%	3.9%	-6.8%	-1.1%	2.8%
Gas	1	8	15	19	23	20	20	24.4%	6.6%	2.3%	1.7%	-1.2%	0.2%
of which CCS	0	0	0	0	1	8	12	n.s.	n.s.	n.s.	n.s.	24.9%	4.5%
Biomass & Waste	0	0	1	1	1	3	7	n.s.	20.9%	-2.6%	5.2%	13.5%	8.7%
of which CCS	0	0	0	0	0	1	4	n.s.	n.s.	n.s.	n.s.	n.s.	15.7%
Nuclear	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	11.9%	4.3%
Hydro	1	2	2	5	6	8	8	6.6%	0.1%	9.7%	1.5%	2.0%	0.9%
Wind	0	0	0	0	2	8	14	n.s.	n.s.	n.s.	27.9%	13.5%	6.4%
Solar	0	0	0	1	6	19	23	n.s.	n.s.	n.s.	16.6%	12.8%	1.8%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	22.5%	17.8%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>14</b>	<b>30</b>	<b>44</b>	<b>61</b>	<b>66</b>	<b>65</b>	<b>61</b>	<b>8.0%</b>	<b>4.0%</b>	<b>3.3%</b>	<b>0.9%</b>	<b>-0.2%</b>	<b>-0.8%</b>
Coal	1	1	2	3	3	1	1	6.8%	6.3%	4.3%	-0.5%	-5.8%	-6.7%
Oil	9	18	25	30	29	26	19	7.1%	3.2%	2.1%	-0.4%	-1.0%	-3.2%
Gas	1	4	6	12	14	11	5	13.5%	4.9%	6.5%	1.9%	-2.7%	-7.2%
Electricity	2	5	10	14	17	19	22	11.9%	6.1%	3.8%	1.9%	1.1%	1.7%
Heat	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	54.8%	10.1%
Biomass & Other	1	2	2	2	4	8	13	1.8%	-0.3%	3.4%	4.6%	7.7%	5.1%
Share of Renewables <sup>3</sup> (%)	13%	8%	6%	8%	12%	29%	55%	-5.0%	-3.2%	3.0%	4.6%	9.1%	6.6%
<b>Industry (incl. non-energy use)</b>	<b>6</b>	<b>14</b>	<b>20</b>	<b>30</b>	<b>31</b>	<b>27</b>	<b>21</b>	<b>8.2%</b>	<b>3.5%</b>	<b>4.2%</b>	<b>0.4%</b>	<b>-1.4%</b>	<b>-2.4%</b>
Coal	1	1	2	3	3	1	1	6.8%	6.3%	4.3%	-0.5%	-5.8%	-6.7%
Oil	4	6	7	9	8	7	5	5.1%	2.1%	2.4%	-0.9%	-1.7%	-2.9%
Gas	1	4	6	11	12	9	4	13.5%	4.5%	6.2%	1.0%	-2.9%	-7.4%
Electricity	1	3	5	6	7	6	5	12.9%	4.9%	3.6%	0.8%	-1.5%	-0.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	3	5	2.5%	n.s.	n.s.	15.0%	14.5%	4.8%
<b>Buildings</b>	<b>3</b>	<b>5</b>	<b>9</b>	<b>11</b>	<b>15</b>	<b>17</b>	<b>19</b>	<b>6.5%</b>	<b>5.1%</b>	<b>2.7%</b>	<b>2.6%</b>	<b>1.6%</b>	<b>1.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	2	1	1	1	0	7.0%	3.5%	-2.9%	-2.7%	-7.0%	-10.2%
Gas	0	0	0	1	2	2	0	7.4%	8.2%	31.7%	12.6%	-2.0%	-10.9%
Electricity	1	2	5	7	9	12	15	10.7%	7.3%	4.0%	2.6%	2.5%	2.5%
Heat	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	54.8%	10.1%
Biomass & Other	1	1	2	2	2	3	2	1.6%	1.8%	1.1%	1.2%	2.0%	-0.7%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>n.s.</b>	<b>26.2%</b>	<b>0.9%</b>	<b>1.8%</b>	<b>1.2%</b>	<b>0.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	1	1	1	1	1	n.s.	25.9%	0.7%	-0.1%	-3.6%	-3.9%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	n.s.	n.s.	5.6%	10.9%	7.8%	4.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	50.7%	12.8%	4.0%
<b>Transport</b>	<b>5</b>	<b>11</b>	<b>15</b>	<b>19</b>	<b>20</b>	<b>20</b>	<b>19</b>	<b>8.4%</b>	<b>3.3%</b>	<b>2.7%</b>	<b>0.3%</b>	<b>0.3%</b>	<b>-0.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	5	10	14	18	18	18	13	8.4%	3.1%	2.5%	0.1%	-0.3%	-3.2%
Gas	0	0	0	0	0	0	0	n.s.	42.2%	1.5%	-0.1%	1.3%	4.3%
Electricity	0	0	0	0	0	0	1	n.s.	15.1%	5.2%	18.5%	9.7%	5.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	5	n.s.	n.s.	50.9%	8.2%	9.5%	12.0%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>5</b>	<b>9</b>	<b>8</b>	<b>13</b>	<b>17</b>	<b>16</b>	<b>20</b>	<b>6.7%</b>	<b>-0.8%</b>	<b>4.6%</b>	<b>2.6%</b>	<b>-0.3%</b>	<b>2.2%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Thailand	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	57	63	67	69	68	66	62	1.0%	0.6%	0.3%	0.0%	-0.3%	-0.6%
GDP per capita (ppp, k\$'05)	4	6	8	10	15	21	28	3.4%	3.7%	2.5%	3.7%	3.7%	3.0%
GDP per capita (mer, k\$'05)	2	2	3	4	6	8	11	3.4%	3.7%	2.5%	3.7%	3.7%	3.0%
Share Value Added - Agriculture (%)	14	9	10	10	9	9	9	-3.8%	1.1%	-0.6%	-0.6%	-0.4%	-0.2%
Share Value Added - Industry (%)	36	39	37	35	33	29	26	0.8%	-0.6%	-0.5%	-0.7%	-1.1%	-1.3%
Share Value Added - Services (%)	50	51	53	55	58	62	66	0.2%	0.2%	0.4%	0.5%	0.7%	0.6%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	18	21	26	-7.8%	10.3%	-2.2%	1.3%	1.2%	2.4%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	28	24	47	43	46	38	32	-1.2%	6.8%	-0.9%	0.8%	-2.0%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	206	278	376	444	412	311	162	3.0%	3.1%	1.7%	-0.7%	-2.8%	-6.3%
Total GHG (excl. sinks)	206	284	394	451	442	347	204	3.2%	3.3%	1.4%	-0.2%	-2.4%	-5.1%
Total GHG (energy, industry, agriculture)	188	268	378	450	442	324	177	3.6%	3.5%	1.8%	-0.2%	-3.0%	-5.9%
CO <sub>2</sub>	89	169	260	332	344	256	137	6.6%	4.4%	2.5%	0.4%	-2.9%	-6.0%
CH <sub>4</sub>	82	81	97	95	77	51	31	0.0%	1.8%	-0.2%	-2.1%	-4.0%	-4.9%
N <sub>2</sub> O	16	16	20	23	21	17	9	0.2%	2.4%	1.3%	-0.8%	-2.2%	-6.1%
F gases	1	1	0	0	0	0	0	-2.4%	-8.4%	-2.4%	-6.0%	0.5%	0.2%
Total GHG from Energy and Industry	117	203	303	374	379	280	152	5.6%	4.1%	2.1%	0.1%	-3.0%	-5.9%
CO <sub>2</sub> Emissions from Fuel Comb.	79	154	241	311	321	237	128	7.0%	4.6%	2.6%	0.3%	-3.0%	-5.9%
Power generation/District heating	27	53	81	82	74	36	3	7.1%	4.3%	0.0%	-1.0%	-6.9%	-22.6%
Industry	13	31	61	90	94	59	35	9.6%	6.9%	4.0%	0.5%	-4.6%	-5.1%
Buildings	3	5	8	11	14	10	4	6.0%	5.8%	2.9%	1.9%	-3.4%	-8.7%
Agriculture	6	9	11	13	12	8	6	4.5%	2.1%	1.9%	-0.7%	-3.7%	-4.1%
Transport	27	44	60	85	90	91	65	4.9%	3.1%	3.6%	0.6%	0.1%	-3.3%
Other	3	11	20	29	36	32	16	13.0%	6.1%	3.7%	2.1%	-1.1%	-6.6%
CO <sub>2</sub> captured (CCS)	0	0	0	0	4	45	90	n.s.	n.s.	n.s.	n.s.	28.7%	7.1%
Coal	0	0	0	0	1	14	21	n.s.	n.s.	n.s.	n.s.	27.6%	4.3%
Gas	0	0	0	0	2	28	44	n.s.	n.s.	n.s.	n.s.	27.7%	4.6%
Biomass	0	0	0	0	0	4	26	n.s.	n.s.	n.s.	n.s.	n.s.	20.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	22	42	73	67	60	57	58	6.7%	5.6%	-0.8%	-1.1%	-0.5%	0.1%
Coal	4	6	6	5	5	4	4	4.5%	-0.1%	-0.8%	-0.2%	-2.9%	-1.0%
Oil	3	9	19	15	6	0	0	11.5%	7.7%	-2.1%	-9.0%	n.s.	n.s.
Natural gas	5	17	30	23	19	14	10	11.9%	6.1%	-2.6%	-1.8%	-2.9%	-3.5%
Biomass	9	10	17	19	23	28	29	0.7%	5.8%	1.0%	1.9%	2.1%	0.4%
Nuclear <sup>1</sup>	0	0	0	0	1	3	4	n.s.	n.s.	n.s.	n.s.	14.3%	4.7%
Hydro	0	1	0	1	1	1	1	1.9%	-0.8%	1.9%	1.3%	1.6%	1.2%
Other renewables	0	0	0	3	5	7	10	n.s.	9.7%	n.s.	3.9%	3.3%	3.3%
Net Imports	14	26	40	76	98	98	82						
Coal	0	2	11	15	9	5	4						
Oil	15	23	26	45	56	57	40						
Natural gas	0	1	3	16	32	34	31						
Biomass	0	0	0	0	0	1	4						
Biofuels	0	0	0	0	0	1	2						
Electricity	0	0	0	1	1	1	1						
Primary Energy Demand <sup>2</sup>	36	68	113	143	158	155	139	6.6%	5.3%	2.4%	1.0%	-0.2%	-1.1%
Coal	4	8	17	20	15	9	7	8.1%	8.0%	2.0%	-3.1%	-5.0%	-1.7%
Oil	18	32	45	60	62	57	40	6.2%	3.5%	2.9%	0.2%	-0.8%	-3.5%
Natural gas	5	17	33	39	51	48	41	13.3%	6.6%	1.7%	2.8%	-0.7%	-1.6%
Biomass	9	10	17	19	23	29	33	0.7%	5.8%	0.9%	1.8%	2.6%	1.3%
Nuclear <sup>1</sup>	0	0	0	0	1	3	4	n.s.	n.s.	n.s.	n.s.	14.3%	4.7%
Hydro	0	1	0	1	1	1	1	1.9%	-0.8%	1.9%	1.3%	1.6%	1.2%
Other renewables	0	0	0	3	5	7	10	n.s.	9.7%	n.s.	3.9%	3.3%	3.3%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	36	68	113	143	158	155	139	6.6%	5.3%	2.4%	1.0%	-0.2%	-1.1%
Energy for Power Generation	9	20	33	34	38	46	52	8.1%	5.0%	0.5%	1.1%	1.8%	1.4%
Other Energy Transformation & Losses	1	5	10	14	19	20	25	14.1%	6.7%	3.4%	3.0%	0.6%	2.1%
Final consumption	28	50	84	112	121	115	95	5.8%	5.3%	2.9%	0.8%	-0.5%	-1.8%
Steel, Non-Met. Minerals and Chem.	2	6	12	17	19	13	9	10.4%	7.0%	4.1%	0.9%	-3.5%	-3.8%
Other Industry	6	10	15	18	20	18	14	5.5%	3.6%	2.1%	1.1%	-1.0%	-2.8%
Non-Energy Use	0	6	18	23	24	21	15	29.1%	12.3%	2.6%	0.2%	-1.0%	-3.5%
Residential	8	8	11	14	14	13	10	0.1%	3.9%	2.4%	0.0%	-1.1%	-2.2%
Services	1	3	6	7	9	12	13	8.2%	6.1%	2.2%	2.8%	2.4%	1.4%
Agriculture	2	3	3	4	5	6	6	4.5%	2.1%	2.0%	1.4%	1.1%	0.7%
Road	9	15	19	28	30	32	28	5.4%	2.9%	3.6%	0.8%	0.6%	-1.2%
Rail	0	0	0	0	0	0	0	-0.6%	-1.1%	1.2%	1.1%	0.8%	0.5%
Aviation	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Other Transport	0	0	0	0	0	0	0	-16.2%	2.7%	8.4%	1.3%	-1.7%	-2.9%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Thailand	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>9</b>	<b>20</b>	<b>32</b>	<b>30</b>	<b>32</b>	<b>35</b>	<b>38</b>	<b>8.3%</b>	<b>5.1%</b>	<b>-0.6%</b>	<b>0.5%</b>	<b>1.0%</b>	<b>0.7%</b>
Coal	3	4	7	9	7	5	4	5.0%	5.2%	3.1%	-2.8%	-2.9%	-1.6%
Oil	2	2	0	0	1	2	1	-0.9%	-19.6%	6.3%	9.4%	7.8%	-6.0%
Gas	4	13	23	18	20	21	22	12.8%	5.9%	-2.1%	0.7%	0.5%	0.5%
Biomass & Waste	0	0	2	2	4	7	11	n.s.	17.5%	-1.2%	7.2%	5.6%	4.1%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>44</b>	<b>96</b>	<b>160</b>	<b>194</b>	<b>227</b>	<b>275</b>	<b>321</b>	<b>8.1%</b>	<b>5.2%</b>	<b>2.0%</b>	<b>1.6%</b>	<b>2.0%</b>	<b>1.5%</b>
Coal	11	18	30	40	31	25	22	4.9%	5.4%	2.9%	-2.4%	-2.1%	-1.6%
of which CCS	0	0	0	0	1	13	19	n.s.	n.s.	n.s.	n.s.	24.8%	3.8%
Oil	10	10	1	2	5	10	6	-0.3%	-19.3%	5.0%	9.6%	7.9%	-5.8%
Gas	18	62	119	100	108	117	132	13.2%	6.8%	-1.8%	0.8%	0.8%	1.2%
of which CCS	0	0	0	0	7	75	117	n.s.	n.s.	n.s.	n.s.	27.1%	4.6%
Biomass & Waste	0	1	3	5	14	27	45	n.s.	20.9%	4.5%	10.0%	7.0%	5.2%
of which CCS	0	0	0	0	0	3	15	n.s.	n.s.	n.s.	n.s.	n.s.	17.9%
Nuclear	0	0	0	0	3	10	16	n.s.	n.s.	n.s.	n.s.	14.4%	4.7%
Hydro	5	6	6	7	8	9	10	1.9%	-0.8%	1.9%	1.3%	1.6%	1.2%
Wind	0	0	0	30	35	48	49	n.s.	n.s.	n.s.	1.5%	3.3%	0.0%
Solar	0	0	0	10	24	28	41	n.s.	n.s.	n.s.	9.0%	1.8%	3.7%
Other	0	0	0	0	0	0	1	7.2%	0.5%	1.6%	31.2%	22.2%	18.4%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>10</b>	<b>27</b>	<b>41</b>	<b>65</b>	<b>78</b>	<b>79</b>	<b>92</b>	<b>10.9%</b>	<b>4.2%</b>	<b>4.7%</b>	<b>1.8%</b>	<b>0.2%</b>	<b>1.5%</b>
Coal	1	3	4	6	7	4	3	5.7%	4.3%	5.1%	0.1%	-5.2%	-2.1%
of which CCS	0	0	0	0	0	2	3	n.s.	n.s.	n.s.	n.s.	25.0%	4.0%
Oil	3	6	10	6	5	2	3	7.0%	5.6%	-5.2%	-2.6%	-7.7%	2.4%
Gas	3	15	21	24	24	19	20	17.7%	3.4%	1.4%	-0.1%	-2.2%	0.5%
of which CCS	0	0	0	0	1	10	16	n.s.	n.s.	n.s.	n.s.	27.2%	5.0%
Biomass & Waste	0	0	1	1	3	4	6	n.s.	9.8%	3.9%	6.2%	3.4%	5.2%
of which CCS	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	n.s.	17.9%
Nuclear	0	0	0	0	0	2	2	n.s.	n.s.	n.s.	n.s.	14.2%	4.5%
Hydro	2	3	5	6	7	8	9	3.5%	3.9%	2.7%	1.3%	1.6%	1.2%
Wind	0	0	0	13	15	20	20	n.s.	n.s.	n.s.	1.4%	2.9%	-0.4%
Solar	0	0	0	7	17	20	28	n.s.	n.s.	n.s.	9.0%	1.6%	3.5%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	21.6%	17.9%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>28</b>	<b>50</b>	<b>84</b>	<b>112</b>	<b>121</b>	<b>115</b>	<b>95</b>	<b>5.8%</b>	<b>5.3%</b>	<b>2.9%</b>	<b>0.8%</b>	<b>-0.5%</b>	<b>-1.8%</b>
Coal	1	3	9	10	7	3	3	12.4%	11.3%	1.5%	-3.7%	-7.7%	-2.2%
Oil	15	29	43	57	58	52	37	6.8%	4.1%	2.9%	0.1%	-1.1%	-3.4%
Gas	0	1	5	12	21	17	10	23.1%	15.2%	10.3%	5.3%	-2.1%	-4.9%
Electricity	3	8	13	16	19	22	26	8.7%	5.4%	2.2%	1.6%	1.8%	1.5%
Heat	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	n.s.	16.8%
Biomass & Other	9	9	14	16	17	20	18	0.2%	4.4%	1.0%	0.5%	1.9%	-0.9%
Share of Renewables <sup>3</sup> (%)	32%	21%	21%	22%	23%	33%	48%	-4.2%	0.3%	0.1%	0.8%	3.5%	3.8%
<b>Industry (incl. non-energy use)</b>	<b>9</b>	<b>22</b>	<b>44</b>	<b>58</b>	<b>62</b>	<b>53</b>	<b>38</b>	<b>9.7%</b>	<b>7.3%</b>	<b>2.9%</b>	<b>0.7%</b>	<b>-1.7%</b>	<b>-3.3%</b>
Coal	1	3	9	10	7	3	3	12.4%	11.3%	1.5%	-3.7%	-7.7%	-2.2%
Oil	3	10	19	25	25	21	15	12.3%	7.2%	2.7%	-0.1%	-1.9%	-3.0%
Gas	0	1	3	9	16	13	8	23.1%	10.9%	11.6%	5.7%	-2.2%	-4.9%
Electricity	2	3	5	7	7	7	6	8.4%	4.7%	2.2%	0.8%	-0.4%	-1.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	3	4	7	7	7	9	6	4.0%	5.0%	-0.5%	0.2%	2.6%	-4.0%
<b>Buildings</b>	<b>9</b>	<b>11</b>	<b>17</b>	<b>21</b>	<b>23</b>	<b>24</b>	<b>24</b>	<b>1.9%</b>	<b>4.6%</b>	<b>2.4%</b>	<b>1.0%</b>	<b>0.4%</b>	<b>-0.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	2	3	3	2	1	0	6.0%	5.8%	0.5%	-3.8%	-6.5%	-8.3%
Gas	0	0	0	1	3	3	1	n.s.	n.s.	n.s.	12.2%	-1.5%	-8.9%
Electricity	2	4	7	9	11	14	17	8.9%	6.0%	2.1%	1.7%	2.5%	1.9%
Heat	0	0	0	0	0	0	2	n.s.	n.s.	n.s.	n.s.	n.s.	16.8%
Biomass & Other	6	5	7	8	8	7	4	-2.1%	2.9%	2.1%	-0.9%	-1.4%	-6.0%
<b>Agriculture</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>4.5%</b>	<b>2.1%</b>	<b>2.0%</b>	<b>1.4%</b>	<b>1.1%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	3	3	4	4	3	2	4.5%	2.1%	1.9%	-0.7%	-3.7%	-4.1%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	1	1	4.8%	8.1%	6.9%	18.9%	10.1%	4.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	2	3	n.s.	n.s.	n.s.	35.2%	10.8%	3.6%
<b>Transport</b>	<b>9</b>	<b>15</b>	<b>20</b>	<b>28</b>	<b>30</b>	<b>32</b>	<b>28</b>	<b>4.9%</b>	<b>2.9%</b>	<b>3.6%</b>	<b>0.8%</b>	<b>0.6%</b>	<b>-1.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	9	15	17	25	27	28	20	4.9%	1.7%	3.7%	0.9%	0.1%	-3.5%
Gas	0	0	1	2	1	1	1	n.s.	n.s.	2.4%	-6.6%	-3.0%	3.6%
Electricity	0	0	0	0	0	1	2	n.s.	6.6%	13.8%	23.7%	13.7%	9.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	1	1	2	3	6	n.s.	n.s.	3.6%	5.7%	5.4%	8.4%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>1</b>	<b>5</b>	<b>10</b>	<b>14</b>	<b>19</b>	<b>20</b>	<b>25</b>	<b>14.1%</b>	<b>6.7%</b>	<b>3.4%</b>	<b>3.0%</b>	<b>0.6%</b>	<b>2.1%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Vietnam	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	68	80	88	98	105	110	113	1.6%	1.0%	1.1%	0.7%	0.4%	0.3%
GDP per capita (ppp, k\$'05)	1	2	3	5	8	12	16	5.8%	5.6%	5.0%	4.8%	4.1%	3.3%
GDP per capita (mer, k\$'05)	0	1	1	1	2	3	5	5.8%	5.6%	5.0%	4.8%	4.1%	3.3%
Share Value Added - Agriculture (%)	14	9	10	8	7	6	6	-3.8%	1.1%	-2.2%	-1.5%	-0.9%	-0.5%
Share Value Added - Industry (%)	36	39	37	37	37	35	33	0.8%	-0.6%	0.1%	-0.1%	-0.5%	-0.7%
Share Value Added - Services (%)	50	51	53	54	56	58	61	0.2%	0.2%	0.3%	0.3%	0.4%	0.5%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	18	21	26	-7.8%	10.3%	-2.2%	1.3%	1.2%	2.4%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	28	24	47	43	46	38	32	-1.2%	6.8%	-0.9%	0.8%	-2.0%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	112	100	275	415	427	291	160	-1.1%	10.6%	4.2%	0.3%	-3.7%	-5.8%
Total GHG (excl. sinks)	112	144	290	428	463	335	210	2.6%	7.3%	4.0%	0.8%	-3.2%	-4.6%
Total GHG (energy, industry, agriculture)	89	144	289	428	463	330	184	4.9%	7.2%	4.0%	0.8%	-3.3%	-5.7%
CO <sub>2</sub>	20	52	149	268	330	231	120	10.0%	11.1%	6.0%	2.1%	-3.5%	-6.3%
CH <sub>4</sub>	59	74	109	115	90	63	43	2.3%	4.0%	0.5%	-2.4%	-3.4%	-3.9%
N <sub>2</sub> O	10	18	31	45	43	36	21	5.7%	5.4%	4.0%	-0.5%	-1.9%	-5.0%
F gases	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Total GHG from Energy and Industry	36	78	205	316	365	257	139	8.2%	10.1%	4.4%	1.5%	-3.5%	-6.0%
CO <sub>2</sub> Emissions from Fuel Comb.	17	44	126	222	263	169	80	9.9%	11.1%	5.9%	1.7%	-4.3%	-7.2%
Power generation/District heating	5	11	41	89	101	32	-8	9.1%	13.7%	8.2%	1.2%	-10.9%	n.s.
Industry	6	14	42	73	88	55	29	9.9%	11.4%	5.7%	1.8%	-4.6%	-6.2%
Buildings	2	7	11	13	16	13	6	13.0%	5.4%	1.1%	2.2%	-2.3%	-7.5%
Agriculture	1	1	2	2	2	2	1	5.0%	3.8%	1.8%	1.3%	-2.9%	-3.7%
Transport	4	11	28	41	52	64	57	9.8%	10.4%	3.8%	2.3%	2.2%	-1.1%
Other	0	0	1	4	5	5	-4	-0.7%	53.3%	9.9%	2.3%	-0.1%	n.s.
CO <sub>2</sub> captured (CCS)	0	0	0	0	1	38	85	n.s.	n.s.	n.s.	n.s.	47.8%	8.4%
Coal	0	0	0	0	1	18	30	n.s.	n.s.	n.s.	n.s.	41.8%	5.0%
Gas	0	0	0	0	0	13	26	n.s.	n.s.	n.s.	n.s.	54.1%	6.7%
Biomass	0	0	0	0	0	6	29	n.s.	n.s.	n.s.	n.s.	n.s.	16.9%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	18	40	66	65	57	68	76	8.3%	5.2%	-0.1%	-1.3%	1.7%	1.2%
Coal	3	7	26	14	0	0	0	10.0%	14.2%	-6.0%	n.s.	n.s.	n.s.
Oil	3	17	15	18	17	16	13	19.9%	-0.7%	1.4%	-0.2%	-1.1%	-2.0%
Natural gas	0	1	8	11	15	17	19	44.5%	19.4%	3.6%	2.8%	1.5%	1.0%
Biomass	12	13	14	15	17	21	25	1.2%	0.3%	1.0%	0.8%	2.3%	2.0%
Nuclear <sup>1</sup>	0	0	0	0	0	2	2	n.s.	n.s.	n.s.	n.s.	14.0%	4.8%
Hydro	0	1	2	5	5	6	6	10.5%	6.6%	7.8%	0.7%	1.1%	0.3%
Other renewables	0	0	0	2	3	6	11	n.s.	n.s.	n.s.	4.6%	9.2%	5.1%
Net Imports	0	-12	-8	24	52	39	26						
Coal	0	-3	-12	18	31	14	10						
Oil	0	-9	3	6	12	16	11						
Natural gas	0	0	0	0	8	9	3						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	17	28	58	89	109	106	102	4.9%	7.6%	4.4%	2.1%	-0.2%	-0.4%
Coal	2	4	15	32	31	14	10	7.0%	12.9%	8.0%	-0.1%	-7.8%	-3.0%
Oil	3	8	19	24	30	31	24	11.2%	9.1%	2.3%	2.4%	0.6%	-2.7%
Natural gas	0	1	8	11	23	26	22	n.s.	21.9%	3.5%	7.1%	1.3%	-1.5%
Biomass	12	13	14	15	17	21	25	1.2%	0.3%	1.1%	0.8%	2.3%	2.0%
Nuclear <sup>1</sup>	0	0	0	0	0	2	2	n.s.	n.s.	n.s.	n.s.	14.0%	4.8%
Hydro	0	1	2	5	5	6	6	10.5%	6.6%	7.8%	0.7%	1.1%	0.3%
Other renewables	0	0	0	2	3	6	11	n.s.	n.s.	n.s.	4.6%	9.2%	5.1%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	17	28	58	89	109	106	102	4.9%	7.6%	4.4%	2.1%	-0.2%	-0.4%
Energy for Power Generation	2	5	16	33	41	39	45	10.8%	12.8%	7.5%	2.1%	-0.5%	1.5%
Other Energy Transformation & Losses	0	0	1	-1	0	2	8	n.s.	n.s.	n.s.	n.s.	17.7%	15.6%
Final consumption	16	25	48	71	87	87	80	4.6%	6.8%	4.0%	2.0%	0.1%	-0.9%
Steel, Non-Met. Minerals and Chem.	0	0	6	15	18	13	9	n.s.	n.s.	9.5%	1.7%	-3.1%	-3.3%
Other Industry	5	8	11	17	22	22	20	5.7%	3.8%	3.9%	2.7%	0.1%	-1.0%
Non-Energy Use	0	0	2	3	3	3	2	16.9%	32.8%	1.3%	2.5%	-0.7%	-4.8%
Residential	10	12	16	19	19	19	16	2.4%	2.9%	1.6%	0.4%	-0.3%	-1.4%
Services	0	1	2	3	4	5	4	12.7%	4.8%	4.6%	4.1%	1.2%	-0.8%
Agriculture	0	0	1	1	1	1	1	5.4%	3.8%	3.0%	2.5%	2.0%	1.5%
Road	1	3	10	15	19	24	26	10.3%	11.4%	4.0%	2.6%	2.5%	0.7%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Aviation	0	0	0	0	0	0	0	1.5%	3.9%	3.2%	0.5%	-0.7%	-3.0%
Other Transport	0	0	0	0	0	0	0	18.2%	8.3%	-3.1%	3.5%	0.2%	-2.0%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Vietnam	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>1</b>	<b>4</b>	<b>14</b>	<b>26</b>	<b>32</b>	<b>25</b>	<b>26</b>	<b>10.9%</b>	<b>14.4%</b>	<b>6.7%</b>	<b>2.1%</b>	<b>-2.6%</b>	<b>0.4%</b>
Coal	1	1	5	17	16	6	6	2.6%	15.5%	13.4%	-0.6%	-8.6%	-1.3%
Oil	0	1	1	1	2	2	1	13.3%	-1.2%	-1.8%	7.3%	-2.0%	-10.5%
Gas	0	1	8	8	14	14	13	n.s.	21.4%	0.5%	5.3%	0.0%	-0.5%
Biomass & Waste	0	0	0	0	0	0	3	6	n.s.	17.0%	19.3%	20.8%	8.5%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	3.0%	1.4%	-0.5%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>9</b>	<b>27</b>	<b>95</b>	<b>185</b>	<b>233</b>	<b>255</b>	<b>299</b>	<b>11.8%</b>	<b>13.6%</b>	<b>6.9%</b>	<b>2.3%</b>	<b>0.9%</b>	<b>1.6%</b>
Coal	2	3	20	70	68	31	27	4.6%	20.2%	13.6%	-0.3%	-7.7%	-1.1%
of which CCS	0	0	0	0	1	15	24	n.s.	n.s.	n.s.	n.s.	36.9%	4.5%
Oil	1	5	3	4	8	7	2	13.2%	-2.8%	2.2%	7.2%	-2.0%	-10.4%
Gas	0	4	44	45	76	80	80	n.s.	26.1%	0.2%	5.4%	0.5%	0.0%
of which CCS	0	0	0	0	1	36	70	n.s.	n.s.	n.s.	n.s.	53.3%	6.9%
Biomass & Waste	0	0	0	0	2	14	32	n.s.	n.s.	18.6%	20.6%	21.3%	8.9%
of which CCS	0	0	0	0	0	6	23	n.s.	n.s.	n.s.	n.s.	n.s.	13.4%
Nuclear	0	0	0	0	2	6	10	n.s.	n.s.	n.s.	n.s.	14.1%	4.8%
Hydro	5	15	28	58	62	70	71	10.5%	6.6%	7.8%	0.7%	1.1%	0.3%
Wind	0	0	0	6	10	32	47	n.s.	n.s.	n.s.	6.2%	11.9%	3.9%
Solar	0	0	0	0	2	14	27	n.s.	n.s.	n.s.	22.6%	22.4%	6.5%
Other	0	0	0	1	2	2	3	n.s.	n.s.	n.s.	3.2%	2.1%	2.1%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>2</b>	<b>6</b>	<b>20</b>	<b>43</b>	<b>57</b>	<b>80</b>	<b>87</b>	<b>11.7%</b>	<b>11.7%</b>	<b>8.2%</b>	<b>2.9%</b>	<b>3.4%</b>	<b>0.9%</b>
Coal	1	1	3	11	14	13	5	-1.0%	17.4%	13.3%	2.3%	-0.4%	-9.3%
of which CCS	0	0	0	0	0	2	3	n.s.	n.s.	n.s.	n.s.	37.5%	4.7%
Oil	1	2	2	3	4	4	4	8.2%	2.2%	6.0%	2.2%	-0.6%	-0.7%
Gas	0	1	6	11	17	19	16	n.s.	19.4%	5.9%	4.1%	0.8%	-1.5%
of which CCS	0	0	0	0	0	5	10	n.s.	n.s.	n.s.	n.s.	54.3%	7.3%
Biomass & Waste	0	0	0	0	0	2	4	n.s.	n.s.	12.6%	20.7%	21.4%	8.6%
of which CCS	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	n.s.	n.s.	13.3%
Nuclear	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	13.9%	4.6%
Hydro	1	3	8	14	15	17	17	16.6%	9.7%	6.0%	0.7%	1.1%	0.3%
Wind	0	0	0	2	4	13	19	n.s.	n.s.	n.s.	6.2%	11.8%	3.8%
Solar	0	0	0	0	1	11	20	n.s.	n.s.	n.s.	22.7%	22.5%	6.3%
Other	0	0	0	0	0	0	0	3.4%	0.0%	10.4%	3.1%	1.1%	2.5%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>16</b>	<b>25</b>	<b>48</b>	<b>71</b>	<b>87</b>	<b>87</b>	<b>80</b>	<b>4.6%</b>	<b>6.8%</b>	<b>4.0%</b>	<b>2.0%</b>	<b>0.1%</b>	<b>-0.9%</b>
Coal	1	3	10	15	15	7	5	9.2%	11.8%	4.2%	0.3%	-7.0%	-4.8%
Oil	2	7	17	23	28	30	24	10.9%	9.8%	3.4%	1.9%	0.7%	-2.2%
Gas	0	0	0	4	10	12	9	n.s.	39.2%	22.5%	9.9%	2.6%	-2.8%
Electricity	1	2	7	14	18	20	23	13.7%	14.5%	6.7%	2.3%	0.9%	1.6%
Heat	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	n.s.	15.1%
Biomass & Other	12	13	14	15	16	17	16	1.2%	0.3%	0.9%	0.3%	1.0%	-0.7%
Share of Renewables <sup>3</sup> (%)	76%	58%	34%	29%	26%	34%	48%	-2.7%	-5.2%	-1.5%	-1.1%	2.8%	3.5%
<b>Industry (incl. non-energy use)</b>	<b>5</b>	<b>8</b>	<b>20</b>	<b>34</b>	<b>43</b>	<b>38</b>	<b>31</b>	<b>5.8%</b>	<b>9.4%</b>	<b>5.7%</b>	<b>2.3%</b>	<b>-1.1%</b>	<b>-2.0%</b>
Coal	1	2	8	13	14	7	4	8.5%	13.4%	5.0%	0.6%	-6.7%	-4.6%
Oil	0	2	4	6	7	6	3	13.4%	10.3%	3.5%	1.8%	-2.4%	-5.7%
Gas	0	0	0	3	7	9	7	n.s.	39.2%	20.2%	8.1%	2.7%	-2.0%
Electricity	0	1	4	8	10	11	12	12.3%	17.7%	7.5%	2.4%	0.3%	0.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	3	3	3	3	4	6	5	1.3%	-2.1%	2.0%	2.0%	3.8%	-1.6%
<b>Buildings</b>	<b>10</b>	<b>13</b>	<b>18</b>	<b>21</b>	<b>24</b>	<b>23</b>	<b>21</b>	<b>2.9%</b>	<b>3.1%</b>	<b>1.9%</b>	<b>0.9%</b>	<b>0.0%</b>	<b>-1.3%</b>
Coal	0	1	2	1	1	0	0	14.3%	6.2%	-1.3%	-3.0%	-14.4%	-15.8%
Oil	0	1	2	2	2	1	1	11.7%	4.6%	1.2%	-0.6%	-3.5%	-6.9%
Gas	0	0	0	1	3	3	2	n.s.	n.s.	n.s.	15.8%	2.1%	-7.2%
Electricity	0	1	3	6	7	8	10	15.9%	12.1%	5.5%	2.0%	1.4%	2.1%
Heat	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	n.s.	15.1%
Biomass & Other	9	10	11	12	11	10	6	1.2%	1.0%	0.5%	-0.7%	-1.0%	-4.9%
<b>Agriculture</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>5.4%</b>	<b>3.8%</b>	<b>3.0%</b>	<b>2.5%</b>	<b>2.0%</b>	<b>1.5%</b>
Coal	0	0	0	0	0	0	0	-9.4%	-2.0%	-0.7%	-1.3%	-6.9%	-7.5%
Oil	0	0	1	1	1	1	0	8.8%	4.2%	1.9%	1.4%	-2.8%	-3.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	1	4.0%	3.5%	8.9%	4.3%	5.0%	3.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	20.2%	5.0%
<b>Transport</b>	<b>1</b>	<b>3</b>	<b>10</b>	<b>15</b>	<b>19</b>	<b>25</b>	<b>26</b>	<b>9.7%</b>	<b>11.2%</b>	<b>3.9%</b>	<b>2.6%</b>	<b>2.5%</b>	<b>0.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	3	10	15	18	23	20	9.9%	11.2%	3.8%	2.2%	2.1%	-1.2%
Gas	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	24.7%	8.1%	8.8%
Electricity	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	15.9%	11.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	5	n.s.	n.s.	n.s.	17.3%	8.3%	14.1%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>-1</b>	<b>0</b>	<b>2</b>	<b>8</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>17.7%</b>	<b>15.6%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Rest South Asia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	262	333	398	468	531	585	626	2.4%	1.8%	1.6%	1.3%	1.0%	0.7%
GDP per capita (ppp, k\$'05)	1	1	2	3	5	8	12	1.9%	3.4%	3.8%	5.3%	5.2%	4.4%
GDP per capita (mer, k\$'05)	0	1	1	1	2	3	4	1.9%	3.4%	3.8%	5.3%	5.2%	4.4%
Share Value Added - Agriculture (%)	29	26	22	17	13	11	10	-1.1%	-1.7%	-2.6%	-2.8%	-1.6%	-0.9%
Share Value Added - Industry (%)	23	24	24	27	29	29	26	0.4%	-0.2%	1.3%	0.7%	-0.2%	-0.9%
Share Value Added - Services (%)	48	50	54	56	58	61	64	0.4%	0.9%	0.3%	0.4%	0.4%	0.5%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	18	21	26	-7.8%	10.3%	-2.2%	1.3%	1.2%	2.4%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	28	24	47	43	46	38	32	-1.2%	6.8%	-0.9%	0.8%	-2.0%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	445	545	671	861	1 103	1 000	658	2.1%	2.1%	2.5%	2.5%	-1.0%	-4.1%
Total GHG (excl. sinks)	445	545	671	861	1 103	1 000	658	2.1%	2.1%	2.5%	2.5%	-1.0%	-4.1%
Total GHG (energy, industry, agriculture)	347	452	614	808	1 062	965	629	2.7%	3.1%	2.8%	2.8%	-1.0%	-4.2%
CO <sub>2</sub>	87	154	242	408	650	629	393	5.8%	4.6%	5.3%	4.8%	-0.3%	-4.6%
CH <sub>4</sub>	216	245	307	327	339	271	189	1.3%	2.3%	0.7%	0.4%	-2.2%	-3.6%
N <sub>2</sub> O	42	52	64	72	73	64	46	2.1%	2.2%	1.1%	0.1%	-1.4%	-3.2%
F gases	1	1	1	1	1	1	1	-2.1%	3.0%	-0.8%	-4.3%	1.8%	2.0%
Total GHG from Energy and Industry	150	239	362	552	814	752	478	4.7%	4.2%	4.3%	4.0%	-0.8%	-4.4%
CO <sub>2</sub> Emissions from Fuel Comb.	81	143	221	374	598	569	351	5.9%	4.5%	5.4%	4.8%	-0.5%	-4.7%
Power generation/District heating	20	44	68	93	132	94	35	8.4%	4.3%	3.2%	3.6%	-3.4%	-9.3%
Industry	25	36	57	78	134	123	92	3.6%	4.9%	3.2%	5.6%	-0.9%	-2.9%
Buildings	12	17	26	55	108	81	20	3.5%	4.1%	7.8%	6.9%	-2.7%	-13.0%
Agriculture	2	3	3	5	6	5	4	3.2%	2.7%	3.2%	2.2%	-1.9%	-2.8%
Transport	19	37	59	133	202	250	205	6.8%	4.8%	8.4%	4.2%	2.1%	-2.0%
Other	3	6	7	10	17	16	-5	7.8%	2.4%	3.1%	5.2%	-0.3%	n.s.
CO <sub>2</sub> captured (CCS)	0	0	0	0	1	66	169	n.s.	n.s.	n.s.	n.s.	48.3%	9.8%
Coal	0	0	0	0	1	29	52	n.s.	n.s.	n.s.	n.s.	46.0%	5.9%
Gas	0	0	0	0	1	35	69	n.s.	n.s.	n.s.	n.s.	50.3%	7.2%
Biomass	0	0	0	0	0	2	48	n.s.	n.s.	n.s.	n.s.	54.0%	34.3%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	56	77	114	115	110	123	140	3.2%	4.1%	0.1%	-0.5%	1.2%	1.3%
Coal	1	1	2	2	4	4	4	1.9%	4.5%	-0.4%	4.7%	1.2%	0.2%
Oil	3	3	3	4	4	3	0	1.0%	1.3%	0.0%	0.5%	-1.4%	-18.8%
Natural gas	14	26	51	63	47	42	39	6.0%	7.2%	2.0%	-2.8%	-1.1%	-0.7%
Biomass	36	44	52	40	43	45	43	2.0%	1.7%	-2.4%	0.6%	0.5%	-0.5%
Nuclear <sup>1</sup>	0	1	1	2	5	12	15	21.2%	5.5%	7.9%	9.9%	9.5%	2.3%
Hydro	2	2	4	4	5	6	7	0.4%	7.0%	0.2%	1.8%	1.7%	1.7%
Other renewables	0	0	0	0	2	11	31	n.s.	n.s.	44.0%	20.4%	16.4%	11.1%
Net Imports	12	24	25	67	165	183	148						
Coal	1	1	3	10	16	16	14						
Oil	12	24	28	57	84	99	86						
Natural gas	-1	-2	-7	-1	64	67	46						
Biomass	0	0	0	2	1	0	0						
Biofuels	0	0	0	0	0	1	3						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	68	100	139	183	274	307	288	4.0%	3.3%	2.8%	4.2%	1.1%	-0.6%
Coal	2	3	6	12	19	20	18	1.1%	8.1%	7.7%	4.8%	0.2%	-0.8%
Oil	14	27	32	60	88	102	86	6.7%	1.5%	6.6%	3.8%	1.5%	-1.7%
Natural gas	14	24	44	61	111	109	85	5.8%	6.4%	3.3%	6.1%	-0.2%	-2.5%
Biomass	36	44	52	42	43	45	43	2.0%	1.7%	-2.0%	0.3%	0.4%	-0.5%
Nuclear <sup>1</sup>	0	1	1	2	5	12	15	21.2%	5.5%	7.9%	9.9%	9.5%	2.3%
Hydro	2	2	4	4	5	6	7	0.4%	7.0%	0.2%	1.8%	1.7%	1.7%
Other renewables	0	0	0	0	2	11	31	n.s.	n.s.	44.0%	20.4%	16.4%	11.1%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	68	100	139	183	274	307	288	4.0%	3.3%	2.8%	4.2%	1.1%	-0.6%
Energy for Power Generation	10	19	31	40	60	82	115	6.8%	4.9%	2.7%	4.2%	3.2%	3.4%
Other Energy Transformation & Losses	1	3	3	4	10	19	35	11.6%	-0.3%	3.8%	9.2%	6.5%	6.3%
Final consumption	60	84	116	153	230	249	216	3.4%	3.3%	2.8%	4.1%	0.8%	-1.4%
Steel, Non-Met. Minerals and Chem.	3	4	7	9	12	11	7	2.7%	5.0%	2.8%	3.1%	-1.3%	-4.3%
Other Industry	7	11	19	24	50	56	45	4.9%	5.3%	2.6%	7.5%	1.0%	-2.1%
Non-Energy Use	4	5	5	7	10	12	10	4.2%	-0.4%	2.8%	4.2%	1.4%	-1.3%
Residential	38	48	60	62	73	58	36	2.4%	2.3%	0.3%	1.7%	-2.4%	-4.7%
Services	1	2	3	5	9	12	10	5.0%	5.1%	3.7%	6.7%	2.0%	-1.2%
Agriculture	1	1	2	3	4	5	6	2.0%	4.0%	3.1%	3.4%	3.0%	2.4%
Road	6	11	18	41	67	90	93	6.2%	5.5%	8.6%	4.9%	3.1%	0.3%
Rail	0	0	0	1	1	1	1	1.5%	0.4%	3.5%	1.8%	2.0%	1.7%
Aviation	0	1	1	1	3	4	5	16.2%	0.1%	4.4%	6.8%	5.4%	1.9%
Other Transport	0	0	0	1	1	1	1	5.2%	9.9%	2.8%	5.0%	2.2%	0.0%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest South Asia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>8</b>	<b>16</b>	<b>25</b>	<b>33</b>	<b>47</b>	<b>53</b>	<b>62</b>	<b>7.8%</b>	<b>4.6%</b>	<b>2.7%</b>	<b>3.6%</b>	<b>1.1%</b>	<b>1.6%</b>
Coal	0	0	0	4	8	12	12	17.8%	12.7%	30.5%	5.8%	4.2%	0.1%
Oil	2	8	9	10	12	8	9	12.6%	2.0%	0.3%	1.7%	-4.0%	1.2%
Gas	5	8	16	19	28	33	34	4.8%	6.4%	1.9%	3.9%	1.6%	0.5%
Biomass & Waste	0	0	0	0	0	1	7	n.s.	n.s.	11.3%	7.1%	17.8%	26.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>52</b>	<b>95</b>	<b>158</b>	<b>206</b>	<b>329</b>	<b>517</b>	<b>739</b>	<b>6.2%</b>	<b>5.2%</b>	<b>2.7%</b>	<b>4.8%</b>	<b>4.6%</b>	<b>3.6%</b>
Coal	0	0	1	17	35	55	58	20.3%	13.0%	35.7%	7.4%	4.5%	0.5%
of which CCS	0	0	0	0	1	32	53	n.s.	n.s.	n.s.	n.s.	45.2%	5.4%
Oil	8	32	40	42	50	33	38	14.2%	2.3%	0.5%	1.7%	-4.0%	1.3%
Gas	19	36	65	85	136	181	201	6.4%	6.1%	2.7%	4.9%	2.9%	1.1%
of which CCS	0	0	0	0	1	76	145	n.s.	n.s.	n.s.	n.s.	57.0%	6.7%
Biomass & Waste	0	0	0	0	0	3	35	n.s.	n.s.	15.9%	12.4%	20.3%	27.8%
of which CCS	0	0	0	0	0	1	32	n.s.	n.s.	n.s.	n.s.	n.s.	46.8%
Nuclear	0	2	3	7	20	50	63	21.2%	5.5%	8.2%	10.3%	9.7%	2.2%
Hydro	24	25	49	50	60	71	84	0.4%	7.0%	0.2%	1.8%	1.7%	1.7%
Wind	0	0	0	3	18	69	136	n.s.	41.0%	41.6%	19.3%	14.7%	7.0%
Solar	0	0	0	1	9	54	121	n.s.	7.8%	53.0%	22.9%	19.1%	8.3%
Other	0	0	0	0	0	1	4	n.s.	n.s.	n.s.	29.2%	20.6%	18.0%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>13</b>	<b>24</b>	<b>34</b>	<b>50</b>	<b>74</b>	<b>139</b>	<b>229</b>	<b>6.5%</b>	<b>3.7%</b>	<b>3.9%</b>	<b>4.0%</b>	<b>6.5%</b>	<b>5.1%</b>
Coal	1	1	1	2	5	8	10	2.2%	3.0%	8.5%	7.7%	5.1%	2.0%
of which CCS	0	0	0	0	0	4	9	n.s.	n.s.	n.s.	n.s.	45.1%	7.6%
Oil	3	5	7	14	15	14	17	4.7%	3.4%	7.3%	0.9%	-0.5%	1.7%
Gas	4	10	15	19	24	31	42	10.5%	3.8%	2.3%	2.3%	2.8%	3.1%
of which CCS	0	0	0	0	0	10	24	n.s.	n.s.	n.s.	n.s.	57.2%	9.5%
Biomass & Waste	0	0	0	0	0	0	5	n.s.	n.s.	5.8%	11.8%	20.0%	28.2%
of which CCS	0	0	0	0	0	0	4	n.s.	n.s.	n.s.	n.s.	n.s.	47.6%
Nuclear	0	0	0	1	3	7	9	13.7%	0.0%	9.4%	10.1%	9.5%	2.0%
Hydro	5	7	11	12	14	16	19	3.7%	4.0%	0.8%	1.8%	1.7%	1.7%
Wind	0	0	0	1	7	28	55	n.s.	29.9%	41.0%	19.1%	14.5%	6.9%
Solar	0	0	0	1	6	32	71	n.s.	n.s.	n.s.	22.8%	19.0%	8.2%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	28.5%	20.0%	17.5%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>60</b>	<b>84</b>	<b>116</b>	<b>153</b>	<b>230</b>	<b>249</b>	<b>216</b>	<b>3.4%</b>	<b>3.3%</b>	<b>2.8%</b>	<b>4.1%</b>	<b>0.8%</b>	<b>-1.4%</b>
Coal	2	2	5	8	11	8	6	0.3%	9.0%	3.7%	4.1%	-3.7%	-2.4%
Oil	11	18	22	49	75	93	76	5.1%	1.6%	8.6%	4.2%	2.2%	-2.0%
Gas	8	14	27	40	78	69	40	5.7%	6.7%	4.2%	7.0%	-1.3%	-5.4%
Electricity	3	6	11	14	23	36	52	6.1%	6.5%	2.7%	4.8%	4.7%	3.6%
Heat	0	0	0	0	0	0	8	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	36	44	52	42	43	44	34	2.0%	1.7%	-2.1%	0.1%	0.2%	-2.5%
Share of Renewables <sup>3</sup> (%)	64%	56%	49%	31%	23%	27%	45%	-1.3%	-1.4%	-4.6%	-3.0%	2.0%	5.1%
<b>Industry (incl. non-energy use)</b>	<b>14</b>	<b>21</b>	<b>31</b>	<b>40</b>	<b>73</b>	<b>78</b>	<b>63</b>	<b>4.2%</b>	<b>4.0%</b>	<b>2.7%</b>	<b>6.1%</b>	<b>0.7%</b>	<b>-2.2%</b>
Coal	2	2	5	7	11	8	6	0.5%	8.5%	3.9%	4.3%	-3.6%	-2.3%
Oil	2	3	2	4	6	10	11	6.1%	-4.1%	5.3%	5.3%	4.3%	1.0%
Gas	6	9	15	19	35	36	29	4.7%	4.7%	2.3%	6.4%	0.3%	-2.3%
Electricity	1	2	4	6	8	10	11	4.6%	7.6%	3.0%	3.3%	2.3%	1.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	3	4	5	5	12	15	6	4.2%	1.9%	0.3%	9.9%	2.0%	-8.6%
<b>Buildings</b>	<b>39</b>	<b>50</b>	<b>63</b>	<b>67</b>	<b>82</b>	<b>69</b>	<b>46</b>	<b>2.5%</b>	<b>2.5%</b>	<b>0.5%</b>	<b>2.1%</b>	<b>-1.7%</b>	<b>-4.0%</b>
Coal	0	0	0	0	0	0	0	-11.7%	31.8%	0.5%	-3.5%	-14.8%	-16.2%
Oil	2	2	2	3	5	6	2	-0.2%	-2.1%	5.3%	4.1%	2.1%	-10.3%
Gas	2	4	8	19	39	27	6	7.8%	6.4%	8.8%	7.6%	-3.7%	-13.9%
Electricity	2	3	6	8	11	16	20	8.4%	6.0%	2.4%	3.4%	3.8%	2.5%
Heat	0	0	0	0	0	0	8	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	33	40	47	37	27	20	10	1.9%	1.7%	-2.5%	-2.9%	-2.9%	-7.4%
<b>Agriculture</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>2.0%</b>	<b>4.0%</b>	<b>3.1%</b>	<b>3.4%</b>	<b>3.0%</b>	<b>2.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	1	1	2	1	1	3.1%	2.7%	3.3%	2.2%	-1.9%	-2.8%
Gas	0	0	0	0	0	0	0	n.s.	2.9%	1.5%	2.2%	-0.7%	-1.4%
Electricity	0	0	1	1	2	3	4	0.1%	6.1%	2.8%	4.2%	4.5%	3.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	n.s.	21.0%	5.7%
<b>Transport</b>	<b>6</b>	<b>12</b>	<b>20</b>	<b>44</b>	<b>71</b>	<b>97</b>	<b>101</b>	<b>6.4%</b>	<b>5.1%</b>	<b>8.2%</b>	<b>5.0%</b>	<b>3.2%</b>	<b>0.4%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	0.0%	0.0%	0.0%
Oil	6	12	16	41	62	76	62	6.3%	3.2%	9.6%	4.2%	2.1%	-2.0%
Gas	0	0	3	2	4	6	5	n.s.	42.7%	-4.9%	6.2%	4.1%	-1.4%
Electricity	0	0	0	0	3	8	17	-7.2%	n.s.	n.s.	40.7%	11.5%	7.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	3	7	17	n.s.	n.s.	n.s.	18.7%	10.5%	9.0%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>10</b>	<b>19</b>	<b>35</b>	<b>11.6%</b>	<b>-0.3%</b>	<b>3.8%</b>	<b>9.2%</b>	<b>6.5%</b>	<b>6.3%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



Rest South East Asia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	170	202	229	257	281	300	314	1.8%	1.3%	1.1%	0.9%	0.7%	0.4%
GDP per capita (ppp, k\$'05)	2	2	3	4	5	6	8	2.8%	4.1%	3.3%	2.1%	1.9%	2.1%
GDP per capita (mer, k\$'05)	1	1	2	2	3	3	4	3.1%	4.2%	3.4%	2.1%	1.9%	2.1%
Share Value Added - Agriculture (%)	14	9	10	9	8	8	7	-3.8%	1.1%	-1.5%	-0.9%	-0.7%	-0.6%
Share Value Added - Industry (%)	36	39	37	37	37	37	37	0.8%	-0.6%	0.0%	0.1%	0.0%	-0.1%
Share Value Added - Services (%)	50	51	53	54	55	55	56	0.2%	0.2%	0.3%	0.1%	0.1%	0.1%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	18	21	26	-7.8%	10.3%	-2.2%	1.3%	1.2%	2.4%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	28	24	47	43	46	38	32	-1.2%	6.8%	-0.9%	0.8%	-2.0%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	779	897	999	1 207	989	613	313	1.4%	1.1%	1.9%	-2.0%	-4.7%	-6.5%
Total GHG (excl. sinks)	779	897	999	1 207	1 098	779	515	1.4%	1.1%	1.9%	-0.9%	-3.4%	-4.1%
Total GHG (energy, industry, agriculture)	565	710	832	1 033	972	652	249	2.3%	1.6%	2.2%	-0.6%	-3.9%	-9.2%
CO <sub>2</sub>	378	494	574	697	687	452	113	2.7%	1.5%	2.0%	-0.1%	-4.1%	-13.0%
CH <sub>4</sub>	141	161	196	255	215	144	95	1.4%	2.0%	2.7%	-1.7%	-3.9%	-4.1%
N <sub>2</sub> O	44	43	42	53	47	38	23	-0.1%	-0.3%	2.3%	-1.1%	-2.0%	-4.8%
F gases	3	12	20	28	22	17	18	15.7%	5.3%	3.7%	-2.6%	-2.5%	0.4%
Total GHG from Energy and Industry	444	578	676	854	818	540	177	2.7%	1.6%	2.4%	-0.4%	-4.1%	-10.5%
CO <sub>2</sub> Emissions from Fuel Comb.	350	470	546	658	638	404	83	3.0%	1.5%	1.9%	-0.3%	-4.5%	-14.7%
Power generation/District heating	111	202	256	334	296	123	-52	6.1%	2.4%	2.7%	-1.2%	-8.4%	n.s.
Industry	132	122	144	155	167	127	45	-0.8%	1.7%	0.7%	0.7%	-2.7%	-9.9%
Buildings	32	33	34	35	35	20	7	0.5%	0.1%	0.4%	0.0%	-5.3%	-9.5%
Agriculture	4	4	2	3	3	2	1	-0.6%	-5.7%	3.1%	0.4%	-3.6%	-4.0%
Transport	45	73	82	98	103	102	82	5.0%	1.2%	1.7%	0.5%	0.0%	-2.1%
Other	26	36	28	33	34	28	-2	3.3%	-2.5%	1.7%	0.5%	-2.0%	n.s.
CO <sub>2</sub> captured (CCS)	0	0	0	0	1	66	207	n.s.	n.s.	n.s.	n.s.	50.7%	12.2%
Coal	0	0	0	0	1	28	44	n.s.	n.s.	n.s.	n.s.	42.5%	4.6%
Gas	0	0	0	0	0	19	34	n.s.	n.s.	n.s.	n.s.	54.6%	6.1%
Biomass	0	0	0	0	0	19	130	n.s.	n.s.	n.s.	n.s.	n.s.	21.1%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	88	91	127	412	494	325	272	0.2%	3.5%	12.5%	1.8%	-4.1%	-1.8%
Coal	32	23	46	289	317	119	35	-3.2%	7.2%	20.2%	0.9%	-9.3%	-11.6%
Oil	9	10	11	7	6	0	0	1.7%	0.5%	-3.7%	-2.3%	-27.4%	n.s.
Natural gas	9	13	24	32	50	34	23	3.3%	6.4%	3.0%	4.6%	-3.8%	-3.7%
Biomass	23	22	24	50	60	81	111	-0.4%	1.0%	7.7%	1.8%	3.1%	3.1%
Nuclear <sup>1</sup>	9	10	11	11	15	27	23	1.6%	0.8%	-0.2%	3.6%	5.6%	-1.4%
Hydro	3	3	3	3	4	4	5	0.2%	1.3%	0.7%	1.0%	1.4%	1.0%
Other renewables	5	10	9	19	42	59	75	7.9%	-1.4%	8.3%	8.0%	3.5%	2.4%
Net Imports	62	111	112	-119	-162	5	47						
Coal	20	37	32	-195	-240	-79	-16						
Oil	47	74	72	90	89	87	63						
Natural gas	-5	-1	7	6	12	24	20						
Biomass	0	0	0	-22	-23	-28	-22						
Biofuels	0	0	0	0	-1	-1	1						
Electricity	0	1	1	1	1	1	1						
Primary Energy Demand <sup>2</sup>	150	202	239	293	332	330	320	3.0%	1.7%	2.0%	1.3%	-0.1%	-0.3%
Coal	52	60	78	94	77	41	19	1.5%	2.6%	1.9%	-2.0%	-6.2%	-7.2%
Oil	56	84	83	97	95	87	63	4.2%	-0.1%	1.6%	-0.2%	-0.9%	-3.2%
Natural gas	4	12	31	38	61	58	43	11.5%	9.7%	2.2%	4.8%	-0.6%	-3.0%
Biomass	23	22	24	28	37	54	89	-0.4%	1.0%	1.8%	2.7%	3.8%	5.2%
Nuclear <sup>1</sup>	9	10	11	11	15	27	23	1.6%	0.8%	-0.2%	3.6%	5.6%	-1.4%
Hydro	3	3	3	3	4	4	5	0.2%	1.3%	0.7%	1.0%	1.4%	1.0%
Other renewables	5	10	9	19	42	59	75	7.9%	-1.4%	8.3%	8.0%	3.5%	2.4%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	150	202	239	293	332	330	320	3.0%	1.7%	2.0%	1.3%	-0.1%	-0.3%
Energy for Power Generation	48	82	101	133	158	161	176	5.6%	2.1%	2.8%	1.7%	0.2%	0.9%
Other Energy Transformation & Losses	12	16	16	17	22	26	32	3.3%	-0.4%	0.8%	2.8%	1.6%	1.9%
Final consumption	105	128	158	187	207	206	187	2.0%	2.1%	1.7%	1.0%	0.0%	-1.0%
Steel, Non-Met. Minerals and Chem.	14	18	22	26	29	27	21	2.9%	2.3%	1.5%	1.1%	-0.8%	-2.4%
Other Industry	29	27	30	35	39	38	34	-0.7%	1.3%	1.3%	1.3%	-0.4%	-1.0%
Non-Energy Use	6	11	27	36	39	38	31	5.8%	9.4%	2.7%	0.8%	-0.2%	-1.9%
Residential	27	29	31	34	36	36	33	0.6%	0.6%	1.2%	0.4%	-0.1%	-0.7%
Services	11	14	17	20	24	25	27	2.6%	2.3%	1.8%	1.4%	0.6%	0.7%
Agriculture	1	1	1	1	2	2	2	-0.2%	-3.1%	3.1%	1.6%	1.4%	1.3%
Road	16	26	26	31	35	37	35	5.0%	0.2%	1.8%	1.1%	0.6%	-0.6%
Rail	0	0	1	1	1	1	1	0.1%	11.3%	3.9%	1.0%	0.7%	0.6%
Aviation	1	1	1	1	1	1	1	5.4%	-4.4%	5.9%	1.6%	0.1%	-1.9%
Other Transport	1	1	1	1	2	1	1	5.2%	-0.8%	0.7%	1.0%	-1.7%	-3.0%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest South East Asia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>32</b>	<b>59</b>	<b>78</b>	<b>100</b>	<b>96</b>	<b>71</b>	<b>72</b>	<b>6.5%</b>	<b>2.8%</b>	<b>2.5%</b>	<b>-0.3%</b>	<b>-3.0%</b>	<b>0.2%</b>
Coal	17	33	45	63	48	24	11	6.7%	3.1%	3.6%	-2.7%	-6.9%	-7.8%
Oil	13	16	7	7	8	9	4	2.4%	-7.7%	-0.8%	1.6%	1.8%	-8.9%
Gas	1	9	24	26	34	24	22	22.2%	10.6%	0.9%	2.8%	-3.5%	-0.6%
Biomass & Waste	0	1	2	2	3	10	31	11.5%	9.2%	0.8%	2.2%	14.8%	11.7%
Other	0	1	1	2	3	4	5	7.8%	-1.6%	7.4%	7.2%	1.2%	2.3%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>198</b>	<b>329</b>	<b>442</b>	<b>560</b>	<b>652</b>	<b>717</b>	<b>817</b>	<b>5.2%</b>	<b>3.0%</b>	<b>2.4%</b>	<b>1.5%</b>	<b>1.0%</b>	<b>1.3%</b>
Coal	69	135	185	261	201	105	51	6.9%	3.2%	3.5%	-2.6%	-6.3%	-6.9%
of which CCS	0	0	0	0	1	26	39	n.s.	n.s.	n.s.	n.s.	38.8%	4.1%
Oil	54	68	30	29	34	40	16	2.3%	-7.9%	-0.4%	1.6%	1.8%	-8.9%
Gas	3	41	132	144	189	128	132	28.2%	12.5%	0.9%	2.7%	-3.8%	0.3%
of which CCS	0	0	0	0	1	49	92	n.s.	n.s.	n.s.	n.s.	54.8%	6.4%
Biomass & Waste	1	2	5	5	9	46	151	13.8%	8.6%	0.2%	5.8%	17.8%	12.7%
of which CCS	0	0	0	0	0	21	115	n.s.	n.s.	n.s.	n.s.	n.s.	18.5%
Nuclear	33	39	42	41	60	106	92	1.6%	0.8%	-0.2%	3.9%	5.8%	-1.4%
Hydro	32	32	37	39	44	50	56	0.2%	1.3%	0.7%	1.0%	1.4%	1.0%
Wind	0	0	1	15	52	118	159	n.s.	n.s.	29.6%	13.1%	8.4%	3.0%
Solar	0	0	0	6	23	77	99	n.s.	n.s.	34.5%	14.6%	13.0%	2.6%
Other	5	12	10	20	41	47	61	7.8%	-1.6%	7.4%	7.2%	1.4%	2.7%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>50</b>	<b>79</b>	<b>104</b>	<b>133</b>	<b>174</b>	<b>209</b>	<b>237</b>	<b>4.7%</b>	<b>2.8%</b>	<b>2.5%</b>	<b>2.8%</b>	<b>1.8%</b>	<b>1.3%</b>
Coal	17	29	35	45	50	29	9	5.5%	1.8%	2.7%	1.0%	-5.2%	-11.0%
of which CCS	0	0	0	0	0	4	6	n.s.	n.s.	n.s.	n.s.	39.1%	4.8%
Oil	15	20	13	15	15	11	9	2.7%	-4.4%	1.7%	0.0%	-3.1%	-1.6%
Gas	2	10	30	35	38	22	26	20.2%	12.0%	1.6%	0.8%	-5.6%	1.7%
of which CCS	0	0	0	0	0	6	13	n.s.	n.s.	n.s.	n.s.	55.2%	7.3%
Biomass & Waste	0	1	1	1	1	6	21	23.2%	4.2%	-2.8%	4.7%	17.5%	12.8%
of which CCS	0	0	0	0	0	3	16	n.s.	n.s.	n.s.	n.s.	n.s.	18.8%
Nuclear	5	5	5	5	7	13	11	0.0%	0.2%	0.1%	3.9%	5.8%	-1.4%
Hydro	10	13	18	18	19	22	25	2.3%	3.4%	-0.1%	1.0%	1.4%	1.0%
Wind	0	0	1	7	22	49	64	n.s.	n.s.	29.0%	12.9%	8.3%	2.8%
Solar	0	0	0	4	15	50	64	n.s.	n.s.	34.5%	14.5%	12.9%	2.3%
Other	1	2	2	3	6	6	8	8.1%	0.2%	4.4%	6.8%	0.7%	2.4%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>105</b>	<b>128</b>	<b>158</b>	<b>187</b>	<b>207</b>	<b>206</b>	<b>187</b>	<b>2.0%</b>	<b>2.1%</b>	<b>1.7%</b>	<b>1.0%</b>	<b>0.0%</b>	<b>-1.0%</b>
Coal	30	23	28	24	23	12	5	-2.7%	1.9%	-1.4%	-0.7%	-6.2%	-7.9%
Oil	36	56	68	82	80	71	54	4.5%	1.9%	1.9%	-0.3%	-1.2%	-2.6%
Gas	1	3	5	12	25	32	19	5.5%	7.0%	9.0%	7.9%	2.4%	-5.1%
Electricity	14	25	34	43	50	56	63	5.6%	3.3%	2.4%	1.5%	1.0%	1.3%
Heat	1	1	1	1	2	4	5	-2.9%	4.0%	1.3%	4.7%	9.6%	1.6%
Biomass & Other	22	21	22	25	28	32	41	-0.7%	0.5%	1.3%	1.1%	1.5%	2.6%
Share of Renewables <sup>3</sup> (%)	24%	19%	18%	20%	24%	38%	62%	-2.1%	-0.5%	0.6%	2.2%	4.5%	5.1%
<b>Industry (incl. non-energy use)</b>	<b>49</b>	<b>56</b>	<b>80</b>	<b>96</b>	<b>107</b>	<b>103</b>	<b>87</b>	<b>1.4%</b>	<b>3.7%</b>	<b>1.8%</b>	<b>1.1%</b>	<b>-0.4%</b>	<b>-1.7%</b>
Coal	26	19	24	22	21	12	5	-2.9%	2.2%	-1.0%	-0.5%	-5.7%	-7.7%
Oil	14	23	35	43	40	33	26	4.7%	4.5%	2.0%	-0.7%	-1.7%	-2.5%
Gas	1	1	3	8	19	26	16	6.5%	10.5%	11.1%	8.4%	3.4%	-5.1%
Electricity	7	11	15	20	24	25	25	4.5%	3.5%	2.9%	1.7%	0.2%	0.3%
Heat	0	0	0	0	0	0	0	-3.6%	0.7%	0.3%	-0.2%	-0.3%	-0.2%
Biomass & Other	1	2	2	3	4	7	14	7.7%	2.8%	1.8%	2.2%	5.9%	8.1%
<b>Buildings</b>	<b>38</b>	<b>43</b>	<b>48</b>	<b>55</b>	<b>59</b>	<b>61</b>	<b>60</b>	<b>1.2%</b>	<b>1.2%</b>	<b>1.4%</b>	<b>0.8%</b>	<b>0.2%</b>	<b>-0.1%</b>
Coal	5	4	4	3	2	0	0	-1.6%	0.1%	-4.2%	-3.0%	-14.4%	-15.8%
Oil	4	5	4	6	4	2	1	2.4%	-0.5%	2.2%	-2.3%	-5.7%	-9.7%
Gas	1	1	2	3	6	5	2	4.9%	2.5%	5.7%	6.1%	-2.1%	-8.7%
Electricity	7	13	18	22	25	28	34	6.8%	3.0%	2.0%	1.2%	1.4%	1.7%
Heat	1	0	1	1	1	4	4	-2.5%	5.3%	1.6%	5.7%	10.6%	1.7%
Biomass & Other	21	19	19	21	21	21	19	-1.2%	0.1%	1.0%	0.2%	-0.2%	-0.9%
<b>Agriculture</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>-0.2%</b>	<b>-3.1%</b>	<b>3.1%</b>	<b>1.6%</b>	<b>1.4%</b>	<b>1.3%</b>
Coal	0	0	0	0	0	0	0	-32.8%	12.8%	-2.2%	-1.3%	-6.9%	n.s.
Oil	1	1	1	1	1	1	0	0.0%	-5.7%	3.1%	0.4%	-3.6%	-4.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	1	1	1	1.5%	4.7%	3.2%	2.7%	3.3%	2.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	1	4.3%	5.4%	0.6%	19.9%	17.4%	4.8%
<b>Transport</b>	<b>17</b>	<b>28</b>	<b>28</b>	<b>34</b>	<b>38</b>	<b>40</b>	<b>38</b>	<b>5.0%</b>	<b>0.1%</b>	<b>1.9%</b>	<b>1.1%</b>	<b>0.5%</b>	<b>-0.7%</b>
Coal	0	0	0	0	0	0	0	-4.4%	-3.7%	-14.1%	0.0%	0.0%	0.0%
Oil	17	28	28	33	35	34	27	5.0%	-0.1%	1.8%	0.4%	-0.1%	-2.3%
Gas	0	0	0	0	1	1	1	n.s.	n.s.	-1.2%	12.1%	5.4%	4.4%
Electricity	0	0	0	0	1	2	3	4.5%	15.0%	3.9%	6.9%	6.2%	5.5%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	2	4	7	n.s.	n.s.	14.3%	11.8%	5.0%	5.8%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>12</b>	<b>16</b>	<b>16</b>	<b>17</b>	<b>22</b>	<b>26</b>	<b>32</b>	<b>3.3%</b>	<b>-0.4%</b>	<b>0.8%</b>	<b>2.8%</b>	<b>1.6%</b>	<b>1.9%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

<b>Australia</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	17	19	22	26	28	31	33	1.1%	1.5%	1.5%	1.1%	0.9%	0.8%
GDP per capita (ppp, k\$'05)	24	30	34	39	46	53	61	2.2%	1.5%	1.3%	1.6%	1.5%	1.3%
GDP per capita (mer, k\$'05)	25	31	36	41	48	56	64	2.2%	1.5%	1.3%	1.6%	1.5%	1.3%
Share Value Added - Agriculture (%)	5	4	2	2	2	2	2	-1.8%	-6.8%	-0.1%	-0.6%	-0.4%	-0.3%
Share Value Added - Industry (%)	31	27	27	27	25	23	22	-1.4%	0.1%	0.0%	-0.7%	-0.7%	-0.7%
Share Value Added - Services (%)	64	69	71	71	73	75	77	0.8%	0.3%	0.0%	0.3%	0.2%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	18	21	26	-7.8%	10.3%	-2.2%	1.3%	1.2%	2.4%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	28	24	47	43	46	38	32	-1.2%	6.8%	-0.9%	0.8%	-2.0%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
<b>Total GHG</b>	<b>513</b>	<b>543</b>	<b>567</b>	<b>518</b>	<b>330</b>	<b>85</b>	<b>- 91</b>	<b>0.6%</b>	<b>0.4%</b>	<b>-0.9%</b>	<b>-4.4%</b>	<b>-12.7%</b>	<b>n.s.</b>
<b>Total GHG (excl. sinks)</b>	<b>551</b>	<b>557</b>	<b>590</b>	<b>525</b>	<b>478</b>	<b>314</b>	<b>201</b>	<b>0.1%</b>	<b>0.6%</b>	<b>-1.2%</b>	<b>-0.9%</b>	<b>-4.1%</b>	<b>-4.4%</b>
<b>Total GHG (energy, industry, agriculture)</b>	<b>419</b>	<b>491</b>	<b>546</b>	<b>508</b>	<b>461</b>	<b>287</b>	<b>92</b>	<b>1.6%</b>	<b>1.1%</b>	<b>-0.7%</b>	<b>-1.0%</b>	<b>-4.6%</b>	<b>-10.7%</b>
CO <sub>2</sub>	276	351	403	382	356	207	28	2.4%	1.4%	-0.5%	-0.7%	-5.3%	-18.3%
CH <sub>4</sub>	110	107	102	88	72	51	39	-0.3%	-0.4%	-1.5%	-2.0%	-3.5%	-2.6%
N <sub>2</sub> O	28	31	33	30	27	22	17	1.1%	0.5%	-0.9%	-1.2%	-2.1%	-2.4%
F gases	5	3	7	9	7	8	9	-6.6%	10.6%	1.8%	-2.9%	1.4%	1.6%
<b>Total GHG from Energy and Industry</b>	<b>339</b>	<b>410</b>	<b>473</b>	<b>438</b>	<b>396</b>	<b>237</b>	<b>50</b>	<b>1.9%</b>	<b>1.4%</b>	<b>-0.8%</b>	<b>-1.0%</b>	<b>-5.0%</b>	<b>-14.4%</b>
<b>CO<sub>2</sub> Emissions from Fuel Comb.</b>	<b>261</b>	<b>334</b>	<b>384</b>	<b>363</b>	<b>338</b>	<b>194</b>	<b>22</b>	<b>2.5%</b>	<b>1.4%</b>	<b>-0.6%</b>	<b>-0.7%</b>	<b>-5.4%</b>	<b>-19.6%</b>
Power generation/District heating	138	186	208	159	140	53	-26	3.0%	1.1%	-2.6%	-1.2%	-9.3%	n.s.
Industry	38	44	43	52	49	30	2	1.4%	-0.2%	1.8%	-0.5%	-4.9%	-22.0%
Buildings	9	11	13	13	14	10	3	2.1%	1.6%	0.6%	0.3%	-3.6%	-10.1%
Agriculture	3	4	6	7	6	4	3	2.2%	3.9%	0.9%	-1.0%	-4.1%	-4.1%
Transport	58	70	83	93	84	62	29	1.9%	1.6%	1.2%	-1.0%	-3.0%	-7.3%
Other	14	19	32	39	44	36	10	2.7%	5.5%	2.1%	1.2%	-2.2%	-11.7%
<b>CO<sub>2</sub> captured (CCS)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>61</b>	<b>129</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>58.5%</b>	<b>30.4%</b>	<b>7.8%</b>
Coal	0	0	0	0	3	28	30	n.s.	n.s.	n.s.	54.9%	25.1%	0.5%
Gas	0	0	0	0	1	19	31	n.s.	n.s.	n.s.	n.s.	31.2%	5.4%
Biomass	0	0	0	0	0	14	68	n.s.	n.s.	n.s.	23.8%	n.s.	17.0%
<b>Energy Balance, by fuel (Mtoe)</b>													
<b>Primary Production</b>	<b>191</b>	<b>249</b>	<b>319</b>	<b>377</b>	<b>429</b>	<b>303</b>	<b>255</b>	<b>2.7%</b>	<b>2.5%</b>	<b>1.7%</b>	<b>1.3%</b>	<b>-3.4%</b>	<b>-1.7%</b>
Coal	137	176	248	273	262	136	98	2.6%	3.4%	1.0%	-0.4%	-6.3%	-3.3%
Oil	32	40	28	23	36	21	0	2.3%	-3.7%	-2.0%	4.8%	-5.2%	n.s.
Natural gas	17	26	38	63	98	95	75	4.1%	4.0%	5.2%	4.5%	-0.3%	-2.4%
Biomass	4	5	4	13	23	36	63	2.4%	-1.4%	11.2%	6.3%	4.5%	5.7%
Nuclear <sup>1</sup>	0	0	0	0	1	2	4	n.s.	n.s.	n.s.	26.5%	14.0%	5.0%
Hydro	1	1	1	1	1	2	2	1.2%	-2.1%	1.4%	0.7%	1.1%	0.1%
Other renewables	0	0	1	4	6	10	14	0.9%	21.5%	20.0%	5.2%	4.7%	3.1%
<b>Net Imports</b>	<b>- 100</b>	<b>- 140</b>	<b>- 196</b>	<b>- 245</b>	<b>- 290</b>	<b>- 174</b>	<b>- 133</b>						
Coal	- 98	- 127	- 197	- 238	- 237	- 121	- 89						
Oil	1	- 6	13	26	7	8	12						
Natural gas	- 3	- 6	- 12	- 28	- 50	- 51	- 43						
Biomass	0	0	0	- 5	- 10	- 9	- 11						
Biofuels	0	0	0	0	- 1	- 1	- 2						
Electricity	0	0	0	0	0	0	0						
<b>Primary Energy Demand<sup>2</sup></b>	<b>91</b>	<b>109</b>	<b>124</b>	<b>133</b>	<b>138</b>	<b>130</b>	<b>122</b>	<b>1.8%</b>	<b>1.2%</b>	<b>0.7%</b>	<b>0.4%</b>	<b>-0.6%</b>	<b>-0.6%</b>
Coal	39	49	51	36	26	15	9	2.4%	0.3%	-3.4%	-3.2%	-5.3%	-5.5%
Oil	33	34	40	49	43	29	12	0.5%	1.6%	2.0%	-1.3%	-3.8%	-8.4%
Natural gas	14	19	26	35	48	45	32	3.0%	3.1%	2.9%	3.3%	-0.7%	-3.4%
Biomass	4	5	4	8	13	28	52	2.4%	-1.4%	5.9%	5.7%	7.4%	6.6%
Nuclear <sup>1</sup>	0	0	0	0	1	2	4	n.s.	n.s.	n.s.	26.5%	14.0%	5.0%
Hydro	1	1	1	1	1	2	2	1.2%	-2.1%	1.4%	0.7%	1.1%	0.1%
Other renewables	0	0	1	4	6	10	14	0.9%	21.5%	20.0%	5.2%	4.7%	3.1%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
<b>Primary Energy Demand</b>	<b>91</b>	<b>109</b>	<b>124</b>	<b>133</b>	<b>138</b>	<b>130</b>	<b>122</b>	<b>1.8%</b>	<b>1.2%</b>	<b>0.7%</b>	<b>0.4%</b>	<b>-0.6%</b>	<b>-0.6%</b>
<b>Energy for Power Generation</b>	<b>38</b>	<b>51</b>	<b>59</b>	<b>52</b>	<b>56</b>	<b>59</b>	<b>68</b>	<b>2.8%</b>	<b>1.5%</b>	<b>-1.1%</b>	<b>0.7%</b>	<b>0.5%</b>	<b>1.4%</b>
<b>Other Energy Transformation &amp; Losses</b>	<b>6</b>	<b>3</b>	<b>6</b>	<b>12</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>-6.9%</b>	<b>7.4%</b>	<b>6.8%</b>	<b>3.1%</b>	<b>0.5%</b>	<b>0.6%</b>
<b>Final consumption</b>	<b>58</b>	<b>71</b>	<b>77</b>	<b>88</b>	<b>90</b>	<b>84</b>	<b>74</b>	<b>2.0%</b>	<b>0.9%</b>	<b>1.3%</b>	<b>0.3%</b>	<b>-0.7%</b>	<b>-1.3%</b>
Steel, Non-Met. Minerals and Chem.	7	8	8	8	7	5	4	0.4%	0.5%	0.3%	-1.1%	-3.2%	-3.3%
Other Industry	13	17	16	20	21	20	18	2.8%	-0.8%	2.2%	0.7%	-0.7%	-0.7%
Non-Energy Use	4	4	5	6	6	5	4	1.2%	1.0%	1.7%	-0.2%	-1.2%	-2.8%
Residential	7	9	10	11	11	11	11	1.9%	1.3%	0.4%	0.6%	0.0%	-0.4%
Services	3	5	7	8	10	11	12	3.8%	3.4%	1.3%	2.0%	1.1%	1.0%
Agriculture	1	2	2	2	3	3	3	2.1%	3.2%	1.1%	1.0%	0.8%	0.6%
Road	19	22	25	27	26	23	17	1.8%	1.0%	1.0%	-0.5%	-1.2%	-2.9%
Rail	1	1	1	1	1	1	1	0.9%	4.2%	1.0%	0.3%	-0.2%	-0.3%
Aviation	1	2	2	4	4	4	3	5.9%	1.8%	5.1%	1.2%	-0.8%	-1.8%
Other Transport	1	0	1	1	1	1	0	-3.9%	6.7%	-1.1%	0.9%	-2.2%	-2.7%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Australia	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>37</b>	<b>49</b>	<b>57</b>	<b>47</b>	<b>48</b>	<b>45</b>	<b>49</b>	<b>2.9%</b>	<b>1.5%</b>	<b>-1.9%</b>	<b>0.2%</b>	<b>-0.6%</b>	<b>0.8%</b>
Coal	32	44	46	30	22	14	8	3.3%	0.5%	-4.1%	-3.2%	-4.7%	-4.8%
Oil	1	1	1	2	3	2	1	-5.7%	4.5%	7.6%	4.0%	-2.9%	-8.2%
Gas	3	4	9	14	21	21	18	1.6%	8.6%	4.0%	4.3%	0.1%	-1.5%
Biomass & Waste	1	1	1	1	3	9	22	-0.2%	0.5%	5.3%	7.7%	12.8%	9.7%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>155</b>	<b>210</b>	<b>251</b>	<b>254</b>	<b>301</b>	<b>354</b>	<b>431</b>	<b>3.1%</b>	<b>1.8%</b>	<b>0.1%</b>	<b>1.7%</b>	<b>1.6%</b>	<b>2.0%</b>
Coal	121	174	181	124	92	61	39	3.7%	0.4%	-3.7%	-2.9%	-4.0%	-4.3%
of which CCS	0	0	0	0	4	32	34	n.s.	n.s.	n.s.	n.s.	24.7%	0.6%
Oil	4	2	4	7	10	8	3	-6.7%	9.3%	4.6%	4.0%	-2.5%	-8.0%
Gas	14	16	45	64	102	115	109	1.2%	10.8%	3.5%	4.8%	1.2%	-0.5%
of which CCS	0	0	0	0	3	47	78	n.s.	n.s.	n.s.	n.s.	31.9%	5.2%
Biomass & Waste	1	1	3	4	10	39	105	4.2%	9.4%	4.6%	9.2%	14.2%	10.3%
of which CCS	0	0	0	0	0	14	59	n.s.	n.s.	n.s.	n.s.	n.s.	15.2%
Nuclear	0	0	0	0	2	9	14	n.s.	n.s.	n.s.	26.8%	14.1%	4.6%
Hydro	15	17	14	16	17	19	19	1.2%	-2.1%	1.4%	0.7%	1.1%	0.1%
Wind	0	0	4	27	45	71	91	n.s.	53.1%	20.6%	5.2%	4.8%	2.5%
Solar	0	0	0	13	22	32	47	14.9%	25.3%	42.7%	5.6%	3.9%	4.0%
Other	0	0	0	0	0	1	4	n.s.	n.s.	7.1%	42.0%	23.9%	21.2%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>38</b>	<b>46</b>	<b>60</b>	<b>77</b>	<b>90</b>	<b>104</b>	<b>127</b>	<b>1.9%</b>	<b>2.6%</b>	<b>2.6%</b>	<b>1.6%</b>	<b>1.5%</b>	<b>2.0%</b>
Coal	24	27	30	26	20	11	7	0.9%	1.2%	-1.3%	-2.5%	-6.0%	-4.3%
of which CCS	0	0	0	0	0	4	5	n.s.	n.s.	n.s.	n.s.	24.6%	2.3%
Oil	2	4	2	2	2	1	1	9.3%	-5.9%	0.4%	0.2%	-5.4%	-1.6%
Gas	4	6	16	18	21	22	21	4.6%	10.5%	0.8%	1.5%	0.5%	-0.2%
of which CCS	0	0	0	0	0	6	11	n.s.	n.s.	n.s.	n.s.	31.9%	6.3%
Biomass & Waste	0	0	1	1	1	5	14	4.5%	4.0%	1.7%	8.7%	13.7%	10.7%
of which CCS	0	0	0	0	0	2	8	n.s.	n.s.	n.s.	n.s.	n.s.	15.4%
Nuclear	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	26.5%	13.9%	4.4%
Hydro	8	9	9	9	10	11	12	1.0%	-0.5%	0.7%	0.7%	1.2%	0.1%
Wind	0	0	2	11	19	30	38	n.s.	49.7%	19.9%	5.1%	4.7%	2.3%
Solar	0	0	0	9	16	23	32	13.6%	24.8%	44.9%	5.6%	3.5%	3.6%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	23.4%	20.6%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>58</b>	<b>71</b>	<b>77</b>	<b>88</b>	<b>90</b>	<b>84</b>	<b>74</b>	<b>2.0%</b>	<b>0.9%</b>	<b>1.3%</b>	<b>0.3%</b>	<b>-0.7%</b>	<b>-1.3%</b>
Coal	6	5	4	5	4	2	1	-0.4%	-2.1%	1.1%	-2.5%	-7.9%	-8.2%
Oil	29	35	39	45	39	27	13	1.8%	1.1%	1.5%	-1.5%	-3.5%	-7.1%
Gas	9	11	12	14	16	13	5	2.5%	1.0%	0.8%	1.9%	-2.0%	-8.6%
Electricity	11	15	18	19	22	26	32	2.9%	1.9%	0.4%	1.8%	1.7%	2.0%
Heat	0	0	0	0	1	1	2	0.0%	11.5%	7.3%	3.9%	6.3%	3.8%
Biomass & Other	3	4	3	6	8	14	21	2.9%	-2.3%	5.0%	4.3%	5.3%	4.0%
Share of Renewables <sup>3</sup> (%)	8%	8%	7%	13%	21%	42%	79%	0.2%	-1.8%	6.4%	5.0%	7.2%	6.5%
<b>Industry (incl. non-energy use)</b>	<b>24</b>	<b>29</b>	<b>29</b>	<b>34</b>	<b>34</b>	<b>30</b>	<b>26</b>	<b>1.9%</b>	<b>-0.2%</b>	<b>1.6%</b>	<b>0.1%</b>	<b>-1.3%</b>	<b>-1.5%</b>
Coal	5	5	4	5	4	2	1	-0.2%	-2.1%	1.1%	-2.5%	-7.9%	-8.2%
Oil	6	8	8	10	8	5	3	1.8%	0.2%	2.5%	-2.3%	-3.7%	-5.1%
Gas	6	8	8	9	11	9	3	2.1%	0.9%	1.0%	1.9%	-2.5%	-10.1%
Electricity	5	7	7	7	8	8	9	2.7%	0.4%	0.0%	1.2%	0.2%	0.7%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	1	2	2	3	4	7	11	5.2%	-3.3%	5.9%	2.3%	5.4%	4.9%
<b>Buildings</b>	<b>11</b>	<b>14</b>	<b>17</b>	<b>19</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>2.5%</b>	<b>2.1%</b>	<b>0.8%</b>	<b>1.2%</b>	<b>0.5%</b>	<b>0.3%</b>
Coal	0	0	0	0	0	0	0	-10.4%	-3.9%	-4.5%	-8.4%	-17.2%	n.s.
Oil	1	1	1	1	1	1	0	0.4%	3.2%	2.9%	1.4%	-2.3%	-10.0%
Gas	3	4	4	4	4	3	1	3.1%	1.3%	-0.1%	-0.2%	-4.2%	-10.2%
Electricity	6	8	11	11	12	13	15	3.2%	3.1%	0.4%	0.9%	0.8%	1.4%
Heat	0	0	0	0	1	1	2	0.0%	11.5%	7.3%	3.9%	6.3%	3.8%
Biomass & Other	2	2	1	2	3	4	4	0.6%	-2.9%	2.8%	4.3%	3.4%	1.2%
<b>Agriculture</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>2.1%</b>	<b>3.2%</b>	<b>1.1%</b>	<b>1.0%</b>	<b>0.8%</b>	<b>0.6%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	2	2	2	1	1	2.2%	3.9%	0.9%	-1.0%	-4.1%	-4.1%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	5.4%	-0.6%	-2.7%	-2.8%
Electricity	0	0	0	0	0	0	1	2.0%	-2.0%	0.6%	4.0%	4.3%	2.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	25.1%	10.6%	3.5%
<b>Transport</b>	<b>21</b>	<b>25</b>	<b>29</b>	<b>33</b>	<b>32</b>	<b>29</b>	<b>22</b>	<b>1.9%</b>	<b>1.3%</b>	<b>1.4%</b>	<b>-0.2%</b>	<b>-1.2%</b>	<b>-2.6%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	21	25	28	32	27	19	9	1.8%	1.1%	1.2%	-1.4%	-3.4%	-7.8%
Gas	0	0	0	0	1	2	2	24.9%	-1.0%	13.4%	16.7%	5.0%	-3.2%
Electricity	0	0	0	1	2	5	8	2.6%	5.4%	4.2%	14.6%	8.6%	5.1%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	1	1	3	4	n.s.	n.s.	7.4%	8.7%	6.4%	5.5%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>6</b>	<b>3</b>	<b>6</b>	<b>12</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>-6.9%</b>	<b>7.4%</b>	<b>6.8%</b>	<b>3.1%</b>	<b>0.5%</b>	<b>0.6%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Japan	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	122	126	127	125	120	114	107	0.3%	0.1%	-0.2%	-0.4%	-0.5%	-0.6%
GDP per capita (ppp, k\$'05)	27	29	31	33	38	44	51	0.8%	0.6%	0.7%	1.3%	1.5%	1.5%
GDP per capita (mer, k\$'05)	32	34	37	39	45	52	60	0.8%	0.6%	0.7%	1.3%	1.5%	1.5%
Share Value Added - Agriculture (%)	2	2	1	1	1	1	1	-3.3%	-2.4%	-0.5%	-0.7%	-0.6%	-0.6%
Share Value Added - Industry (%)	38	31	27	26	26	26	27	-1.9%	-1.2%	-0.5%	0.0%	0.0%	0.0%
Share Value Added - Services (%)	60	67	71	73	73	73	73	1.1%	0.6%	0.2%	0.0%	0.0%	0.0%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	18	21	26	-7.8%	10.3%	-2.2%	1.3%	1.2%	2.4%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	28	24	47	43	46	38	32	-1.2%	6.8%	-0.9%	0.8%	-2.0%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	1 093	1 177	1 102	958	800	504	191	0.7%	-0.7%	-1.4%	-1.8%	-4.5%	-9.2%
Total GHG (excl. sinks)	1 168	1 266	1 177	1 000	802	510	200	0.8%	-0.7%	-1.6%	-2.2%	-4.4%	-8.9%
Total GHG (energy, industry, agriculture)	1 160	1 262	1 174	999	786	443	164	0.8%	-0.7%	-1.6%	-2.4%	-5.6%	-9.4%
CO <sub>2</sub>	1 072	1 184	1 124	953	752	415	143	1.0%	-0.5%	-1.6%	-2.3%	-5.8%	-10.1%
CH <sub>4</sub>	32	26	21	19	16	12	8	-2.2%	-2.3%	-0.7%	-1.7%	-3.1%	-4.0%
N <sub>2</sub> O	30	28	21	18	13	10	7	-0.8%	-2.8%	-1.3%	-3.3%	-2.5%	-3.4%
F gases	26	25	9	9	5	5	6	-0.2%	-10.2%	0.6%	-5.4%	0.3%	1.6%
Total GHG from Energy and Industry	1 131	1 237	1 150	975	765	426	152	0.9%	-0.7%	-1.6%	-2.4%	-5.7%	-9.8%
CO <sub>2</sub> Emissions from Fuel Comb.	986	1 099	1 057	889	696	376	123	1.1%	-0.4%	-1.7%	-2.4%	-6.0%	-10.5%
Power generation/District heating	337	386	433	358	268	87	-40	1.4%	1.1%	-1.9%	-2.9%	-10.6%	n.s.
Industry	225	214	186	166	141	98	70	-0.5%	-1.4%	-1.1%	-1.6%	-3.6%	-3.3%
Buildings	143	177	156	120	91	58	34	2.1%	-1.3%	-2.6%	-2.8%	-4.3%	-5.4%
Agriculture	21	16	10	10	9	5	3	-2.6%	-4.3%	-0.3%	-1.7%	-4.7%	-4.6%
Transport	213	259	229	202	163	112	52	2.0%	-1.3%	-1.3%	-2.1%	-3.7%	-7.4%
Other	47	46	43	34	26	15	5	-0.1%	-0.5%	-2.6%	-2.5%	-5.1%	-10.1%
CO <sub>2</sub> captured (CCS)	0	0	0	0	11	104	183	n.s.	n.s.	n.s.	n.s.	25.4%	5.8%
Coal	0	0	0	0	11	83	104	n.s.	n.s.	n.s.	n.s.	22.8%	2.4%
Gas	0	0	0	0	0	5	13	n.s.	n.s.	n.s.	57.2%	41.0%	9.4%
Biomass	0	0	0	0	0	16	65	n.s.	n.s.	n.s.	18.1%	n.s.	15.0%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	76	107	101	100	132	172	200	3.5%	-0.7%	0.0%	2.8%	2.7%	1.6%
Coal	5	2	0	0	0	0	0	-9.4%	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	1	1	1	1	1	0	0	1.2%	-0.1%	0.8%	-0.5%	n.s.	n.s.
Natural gas	2	2	3	2	1	1	1	1.6%	3.0%	-2.9%	-3.4%	-4.7%	-4.8%
Biomass	5	6	10	12	19	26	29	1.6%	5.5%	2.2%	4.9%	2.9%	1.1%
Nuclear <sup>1</sup>	54	85	76	63	74	95	107	4.8%	-1.1%	-1.8%	1.6%	2.4%	1.2%
Hydro	8	8	8	8	9	9	9	0.1%	-0.7%	0.3%	0.9%	0.2%	0.1%
Other renewables	3	4	3	14	27	42	55	3.4%	-0.8%	15.3%	6.8%	4.2%	2.9%
Net Imports	369	418	404	344	292	221	153						
Coal	77	100	119	116	90	53	36						
Oil	244	254	202	155	121	89	52						
Natural gas	47	64	83	69	67	49	38						
Biomass	0	0	0	4	14	28	26						
Biofuels	0	0	0	0	1	1	1						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	446	525	505	445	424	393	354	1.7%	-0.4%	-1.3%	-0.5%	-0.8%	-1.0%
Coal	82	102	119	116	90	53	36	2.2%	1.6%	-0.3%	-2.5%	-5.1%	-3.8%
Oil	245	255	202	156	122	89	52	0.4%	-2.3%	-2.6%	-2.4%	-3.1%	-5.2%
Natural gas	49	66	86	71	68	50	38	2.9%	2.7%	-1.9%	-0.4%	-3.1%	-2.7%
Biomass	5	6	10	16	33	54	54	1.6%	5.5%	5.1%	7.5%	5.0%	0.1%
Nuclear <sup>1</sup>	54	85	76	63	74	95	107	4.8%	-1.1%	-1.8%	1.6%	2.4%	1.2%
Hydro	8	8	8	8	9	9	9	0.1%	-0.7%	0.3%	0.9%	0.2%	0.1%
Other renewables	3	4	3	14	27	42	55	3.4%	-0.8%	15.3%	6.8%	4.2%	2.9%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	446	525	505	445	424	393	354	1.7%	-0.4%	-1.3%	-0.5%	-0.8%	-1.0%
Energy for Power Generation	176	223	230	204	212	224	245	2.4%	0.3%	-1.2%	0.4%	0.6%	0.9%
Other Energy Transformation & Losses	20	23	20	14	12	11	8	1.5%	-1.8%	-3.3%	-1.3%	-1.5%	-2.5%
Final consumption	316	362	342	308	289	258	217	1.4%	-0.6%	-1.0%	-0.6%	-1.1%	-1.7%
Steel, Non-Met. Minerals and Chem.	62	62	60	57	51	37	25	0.0%	-0.3%	-0.5%	-1.1%	-3.1%	-3.8%
Other Industry	52	51	42	35	35	34	33	-0.2%	-1.8%	-1.9%	-0.1%	-0.2%	-0.3%
Non-Energy Use	39	46	45	41	40	38	33	1.5%	-0.3%	-0.8%	-0.4%	-0.4%	-1.4%
Residential	38	49	50	41	38	36	33	2.5%	0.2%	-2.0%	-0.7%	-0.5%	-0.9%
Services	45	62	64	61	62	61	58	3.1%	0.3%	-0.4%	0.1%	-0.2%	-0.5%
Agriculture	7	5	3	3	3	4	4	-2.6%	-4.4%	-0.2%	0.3%	0.3%	0.2%
Road	63	78	69	61	52	41	25	2.1%	-1.2%	-1.2%	-1.6%	-2.5%	-4.8%
Rail	2	2	2	2	2	2	2	0.4%	-0.1%	-0.4%	0.6%	0.6%	0.6%
Aviation	3	4	4	4	4	4	3	2.1%	1.1%	-0.7%	0.1%	-0.7%	-2.5%
Other Transport	4	5	3	3	3	2	1	0.9%	-3.3%	-0.9%	-0.8%	-3.2%	-3.7%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Japan	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>111</b>	<b>125</b>	<b>143</b>	<b>118</b>	<b>101</b>	<b>79</b>	<b>73</b>	<b>1.2%</b>	<b>1.3%</b>	<b>-1.9%</b>	<b>-1.5%</b>	<b>-2.4%</b>	<b>-0.8%</b>
Coal	25	47	61	61	45	31	24	6.8%	2.6%	0.0%	-3.1%	-3.7%	-2.4%
Oil	51	28	18	4	3	5	0	-5.9%	-4.1%	-13.3%	-4.1%	4.7%	-29.1%
Gas	33	47	56	43	38	18	11	3.5%	1.9%	-2.7%	-1.2%	-7.3%	-4.3%
Biomass & Waste	2	3	7	9	15	25	36	2.9%	8.6%	2.5%	5.0%	5.7%	3.7%
Other	0	0	0	1	1	1	1	6.8%	-2.4%	10.9%	4.1%	0.3%	2.3%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>842</b>	<b>1 059</b>	<b>1 118</b>	<b>1 029</b>	<b>1 112</b>	<b>1 198</b>	<b>1 332</b>	<b>2.3%</b>	<b>0.5%</b>	<b>-0.8%</b>	<b>0.8%</b>	<b>0.8%</b>	<b>1.1%</b>
Coal	116	229	299	305	227	149	115	7.0%	2.7%	0.2%	-2.9%	-4.1%	-2.5%
of which CCS	0	0	0	0	11	87	115	n.s.	n.s.	n.s.	n.s.	22.7%	2.9%
Oil	237	135	92	19	12	19	1	-5.4%	-3.8%	-14.7%	-4.1%	4.6%	-29.1%
Gas	179	256	301	229	203	89	69	3.7%	1.6%	-2.7%	-1.2%	-8.0%	-2.4%
of which CCS	0	0	0	0	0	15	37	n.s.	n.s.	n.s.	n.s.	43.2%	9.8%
Biomass & Waste	11	16	36	43	68	116	171	3.7%	8.8%	1.8%	4.5%	5.5%	3.9%
of which CCS	0	0	0	0	0	17	71	n.s.	n.s.	n.s.	n.s.	n.s.	15.3%
Nuclear	202	322	288	247	292	378	430	4.8%	-1.1%	-1.5%	1.7%	2.6%	1.3%
Hydro	96	97	91	94	102	104	105	0.1%	-0.7%	0.3%	0.9%	0.2%	0.1%
Wind	0	0	5	41	130	225	267	n.s.	46.9%	23.2%	12.1%	5.6%	1.7%
Solar	0	0	4	43	66	105	148	41.7%	27.0%	27.6%	4.3%	4.7%	3.5%
Other	2	3	3	7	12	14	27	6.8%	-2.4%	10.9%	4.6%	2.0%	6.4%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>227</b>	<b>261</b>	<b>286</b>	<b>332</b>	<b>389</b>	<b>407</b>	<b>466</b>	<b>1.4%</b>	<b>0.9%</b>	<b>1.5%</b>	<b>1.6%</b>	<b>0.5%</b>	<b>1.3%</b>
Coal	31	63	63	74	71	32	20	7.4%	0.1%	1.6%	-0.4%	-7.8%	-4.4%
of which CCS	0	0	0	0	1	12	20	n.s.	n.s.	n.s.	n.s.	23.5%	5.2%
Oil	78	66	56	48	39	33	31	-1.6%	-1.6%	-1.6%	-2.0%	-1.5%	-0.9%
Gas	47	37	55	54	51	24	29	-2.3%	4.1%	-0.3%	-0.6%	-7.1%	1.8%
of which CCS	0	0	0	0	0	2	5	n.s.	n.s.	n.s.	n.s.	43.6%	10.7%
Biomass & Waste	3	3	8	7	11	17	26	1.8%	9.6%	-0.2%	4.5%	4.3%	4.2%
of which CCS	0	0	0	0	0	2	9	n.s.	n.s.	n.s.	n.s.	n.s.	15.4%
Nuclear	31	45	49	40	46	58	65	3.9%	0.8%	-2.1%	1.5%	2.4%	1.1%
Hydro	38	46	48	54	59	60	60	2.0%	0.4%	1.1%	0.9%	0.2%	0.1%
Wind	0	0	2	18	55	94	109	n.s.	32.7%	22.6%	11.9%	5.5%	1.6%
Solar	0	0	4	37	55	86	121	43.4%	27.1%	26.1%	4.2%	4.6%	3.4%
Other	0	1	1	1	2	2	4	7.0%	0.1%	7.2%	4.7%	1.9%	5.8%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>316</b>	<b>362</b>	<b>342</b>	<b>308</b>	<b>289</b>	<b>258</b>	<b>217</b>	<b>1.4%</b>	<b>-0.6%</b>	<b>-1.0%</b>	<b>-0.6%</b>	<b>-1.1%</b>	<b>-1.7%</b>
Coal	50	46	48	47	38	17	8	-0.8%	0.3%	-0.2%	-2.1%	-7.8%	-7.7%
Oil	182	208	170	144	112	80	49	1.3%	-2.0%	-1.7%	-2.4%	-3.4%	-4.7%
Gas	15	23	34	30	32	35	30	4.2%	4.1%	-1.4%	0.8%	0.8%	-1.7%
Electricity	64	81	86	80	86	93	103	2.3%	0.6%	-0.8%	0.8%	0.8%	1.1%
Heat	1	1	1	1	2	4	8	0.4%	-2.9%	1.2%	3.8%	8.7%	7.1%
Biomass & Other	3	3	3	7	19	30	20	0.2%	0.3%	10.2%	10.2%	4.6%	-4.1%
Share of Renewables <sup>3</sup> (%)	5%	4%	5%	10%	21%	37%	49%	-1.2%	1.8%	7.2%	7.8%	6.1%	2.7%
<b>Industry (incl. non-energy use)</b>	<b>153</b>	<b>158</b>	<b>147</b>	<b>133</b>	<b>125</b>	<b>109</b>	<b>92</b>	<b>0.3%</b>	<b>-0.7%</b>	<b>-1.0%</b>	<b>-0.6%</b>	<b>-1.3%</b>	<b>-1.8%</b>
Coal	49	45	47	46	37	17	8	-0.7%	0.4%	-0.2%	-2.1%	-7.8%	-7.6%
Oil	69	74	61	51	41	34	29	0.7%	-1.9%	-1.7%	-2.2%	-2.0%	-1.6%
Gas	4	5	8	8	13	20	18	2.9%	4.5%	0.1%	4.8%	4.2%	-0.8%
Electricity	29	31	28	24	26	27	29	0.7%	-1.0%	-1.7%	0.9%	0.6%	0.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	3	3	3	3	7	12	8	0.4%	0.4%	2.2%	8.3%	4.6%	-3.9%
<b>Buildings</b>	<b>83</b>	<b>110</b>	<b>113</b>	<b>102</b>	<b>100</b>	<b>97</b>	<b>91</b>	<b>2.8%</b>	<b>0.3%</b>	<b>-1.0%</b>	<b>-0.2%</b>	<b>-0.3%</b>	<b>-0.7%</b>
Coal	1	1	1	0	0	0	0	-4.4%	-1.6%	-1.8%	-8.4%	-17.2%	-17.5%
Oil	36	42	29	22	16	10	5	1.6%	-3.6%	-2.9%	-2.9%	-4.5%	-6.6%
Gas	11	18	26	21	17	11	7	4.7%	4.0%	-2.2%	-2.4%	-3.9%	-4.1%
Electricity	34	48	56	54	56	58	65	3.6%	1.5%	-0.4%	0.3%	0.4%	1.1%
Heat	1	1	1	1	2	4	8	0.4%	-2.9%	1.2%	3.8%	8.7%	7.1%
Biomass & Other	0	0	0	3	10	13	5	-11.2%	-20.8%	n.s.	11.0%	3.6%	-9.0%
<b>Agriculture</b>	<b>7</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>-2.6%</b>	<b>-4.4%</b>	<b>-0.2%</b>	<b>0.3%</b>	<b>0.3%</b>	<b>0.2%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	7	5	3	3	3	2	1	-2.6%	-4.3%	-0.3%	-1.7%	-4.7%	-4.6%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	1	-0.3%	-5.7%	1.2%	9.6%	8.0%	3.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	2	n.s.	n.s.	n.s.	38.9%	10.4%	3.2%
<b>Transport</b>	<b>72</b>	<b>88</b>	<b>78</b>	<b>70</b>	<b>61</b>	<b>48</b>	<b>31</b>	<b>2.0%</b>	<b>-1.2%</b>	<b>-1.1%</b>	<b>-1.4%</b>	<b>-2.3%</b>	<b>-4.3%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	71	87	77	67	53	34	14	2.0%	-1.2%	-1.3%	-2.4%	-4.2%	-8.4%
Gas	0	0	0	0	3	4	4	n.s.	n.s.	n.s.	18.1%	4.5%	0.0%
Electricity	1	2	2	2	4	7	8	1.0%	0.2%	0.7%	9.0%	5.1%	2.2%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	2	3	5	n.s.	n.s.	n.s.	12.6%	7.5%	3.6%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>20</b>	<b>23</b>	<b>20</b>	<b>14</b>	<b>12</b>	<b>11</b>	<b>8</b>	<b>1.5%</b>	<b>-1.8%</b>	<b>-3.3%</b>	<b>-1.3%</b>	<b>-1.5%</b>	<b>-2.5%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

<b>Korea (Rep.)</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	43	46	49	51	53	52	51	0.7%	0.6%	0.4%	0.2%	0.0%	-0.3%
GDP per capita (ppp, k\$'05)	11	19	27	34	44	51	57	5.3%	3.5%	2.5%	2.4%	1.5%	1.1%
GDP per capita (mer, k\$'05)	9	15	22	29	36	42	47	5.8%	3.8%	2.5%	2.4%	1.5%	1.1%
Share Value Added - Agriculture (%)	9	5	3	3	3	2	2	-6.4%	-5.5%	-0.2%	-0.3%	-0.2%	-0.1%
Share Value Added - Industry (%)	42	38	39	37	34	32	30	-0.9%	0.2%	-0.4%	-0.8%	-0.7%	-0.5%
Share Value Added - Services (%)	49	57	59	60	63	65	67	1.5%	0.2%	0.3%	0.5%	0.4%	0.3%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	18	21	26	-7.8%	10.3%	-2.2%	1.3%	1.2%	2.4%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	28	24	47	43	46	38	32	-1.2%	6.8%	-0.9%	0.8%	-2.0%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
<b>Total GHG</b>	<b>282</b>	<b>510</b>	<b>628</b>	<b>664</b>	<b>522</b>	<b>389</b>	<b>186</b>	<b>6.1%</b>	<b>2.1%</b>	<b>0.6%</b>	<b>-2.4%</b>	<b>-2.9%</b>	<b>-7.1%</b>
<b>Total GHG (excl. sinks)</b>	<b>309</b>	<b>537</b>	<b>662</b>	<b>698</b>	<b>554</b>	<b>413</b>	<b>210</b>	<b>5.7%</b>	<b>2.1%</b>	<b>0.5%</b>	<b>-2.3%</b>	<b>-2.9%</b>	<b>-6.5%</b>
<b>Total GHG (energy, industry, agriculture)</b>	<b>309</b>	<b>536</b>	<b>660</b>	<b>692</b>	<b>543</b>	<b>411</b>	<b>210</b>	<b>5.7%</b>	<b>2.1%</b>	<b>0.5%</b>	<b>-2.4%</b>	<b>-2.8%</b>	<b>-6.5%</b>
CO <sub>2</sub>	261	476	607	640	499	375	186	6.2%	2.5%	0.5%	-2.5%	-2.8%	-6.8%
CH <sub>4</sub>	31	31	32	31	28	23	15	-0.1%	0.3%	-0.2%	-1.1%	-2.1%	-4.2%
N <sub>2</sub> O	11	16	13	14	12	10	7	4.3%	-2.0%	0.8%	-1.4%	-1.7%	-3.3%
F gases	6	13	8	7	4	3	2	7.5%	-4.7%	-1.6%	-4.9%	-4.5%	-0.9%
<b>Total GHG from Energy and Industry</b>	<b>289</b>	<b>519</b>	<b>640</b>	<b>669</b>	<b>520</b>	<b>391</b>	<b>196</b>	<b>6.0%</b>	<b>2.1%</b>	<b>0.4%</b>	<b>-2.5%</b>	<b>-2.8%</b>	<b>-6.7%</b>
<b>CO<sub>2</sub> Emissions from Fuel Comb.</b>	<b>237</b>	<b>434</b>	<b>571</b>	<b>599</b>	<b>462</b>	<b>344</b>	<b>171</b>	<b>6.2%</b>	<b>2.8%</b>	<b>0.5%</b>	<b>-2.6%</b>	<b>-2.9%</b>	<b>-6.8%</b>
Power generation/District heating	42	133	264	252	150	71	24	12.1%	7.1%	-0.5%	-5.1%	-7.2%	-10.4%
Industry	64	112	123	151	136	123	71	5.8%	0.9%	2.1%	-1.1%	-0.9%	-5.4%
Buildings	69	65	55	52	47	39	18	-0.6%	-1.7%	-0.5%	-1.0%	-2.0%	-7.4%
Agriculture	5	10	7	6	4	3	2	7.5%	-3.7%	-1.4%	-3.5%	-4.3%	-4.5%
Transport	44	80	91	105	102	90	49	6.2%	1.2%	1.5%	-0.4%	-1.2%	-5.9%
Other	13	33	32	32	24	19	8	10.0%	-0.5%	0.1%	-2.8%	-2.4%	-8.4%
<b>CO<sub>2</sub> captured (CCS)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>61</b>	<b>103</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>n.s.</b>	<b>17.8%</b>	<b>5.4%</b>
Coal	0	0	0	0	10	50	74	n.s.	n.s.	n.s.	n.s.	17.5%	3.9%
Gas	0	0	0	0	2	9	20	n.s.	n.s.	n.s.	n.s.	17.8%	8.5%
Biomass	0	0	0	0	0	2	9	n.s.	n.s.	n.s.	17.9%	44.2%	18.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
<b>Primary Production</b>	<b>25</b>	<b>37</b>	<b>49</b>	<b>75</b>	<b>128</b>	<b>168</b>	<b>181</b>	<b>4.0%</b>	<b>2.7%</b>	<b>4.4%</b>	<b>5.5%</b>	<b>2.8%</b>	<b>0.8%</b>
Coal	8	4	1	1	0	0	0	-6.5%	-12.7%	-4.7%	-6.4%	-3.1%	-1.4%
Oil	0	1	1	0	0	0	0	n.s.	0.4%	n.s.	n.s.	n.s.	n.s.
Natural gas	0	0	0	1	1	1	1	n.s.	n.s.	3.0%	4.9%	1.6%	0.0%
Biomass	3	3	7	8	9	9	10	2.2%	7.5%	2.4%	0.4%	-0.2%	1.2%
Nuclear <sup>1</sup>	14	29	39	62	109	142	149	7.5%	3.1%	4.7%	5.8%	2.7%	0.4%
Hydro	1	0	1	1	1	1	1	-1.2%	1.4%	2.9%	0.6%	0.2%	0.1%
Other renewables	0	0	0	2	8	14	21	15.8%	14.6%	30.1%	12.3%	6.7%	3.7%
<b>Net Imports</b>	<b>70</b>	<b>156</b>	<b>208</b>	<b>227</b>	<b>195</b>	<b>172</b>	<b>120</b>						
Coal	17	40	75	75	40	32	25						
Oil	50	98	94	106	95	82	50						
Natural gas	3	17	38	45	59	55	40						
Biomass	0	0	0	1	0	0	0						
Biofuels	0	0	0	0	1	3	4						
Electricity	0	0	0	0	0	0	0						
<b>Primary Energy Demand<sup>2</sup></b>	<b>95</b>	<b>193</b>	<b>257</b>	<b>302</b>	<b>322</b>	<b>340</b>	<b>301</b>	<b>7.4%</b>	<b>2.9%</b>	<b>1.6%</b>	<b>0.7%</b>	<b>0.5%</b>	<b>-1.2%</b>
Coal	25	44	76	76	41	33	25	6.1%	5.5%	0.0%	-6.1%	-2.2%	-2.6%
Oil	50	99	95	106	95	82	50	7.0%	-0.4%	1.1%	-1.1%	-1.4%	-4.8%
Natural gas	3	17	39	45	60	56	41	20.1%	8.5%	1.6%	2.8%	-0.6%	-3.1%
Biomass	3	3	7	9	9	9	10	2.2%	7.4%	2.9%	0.0%	-0.3%	1.2%
Nuclear <sup>1</sup>	14	29	39	62	109	142	149	7.5%	3.1%	4.7%	5.8%	2.7%	0.4%
Hydro	1	0	1	1	1	1	1	-1.2%	1.4%	2.9%	0.6%	0.2%	0.1%
Other renewables	0	0	0	2	8	14	21	15.8%	14.6%	30.1%	12.3%	6.7%	3.7%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
<b>Primary Energy Demand</b>	<b>95</b>	<b>193</b>	<b>257</b>	<b>302</b>	<b>322</b>	<b>340</b>	<b>301</b>	<b>7.4%</b>	<b>2.9%</b>	<b>1.6%</b>	<b>0.7%</b>	<b>0.5%</b>	<b>-1.2%</b>
<b>Energy for Power Generation</b>	<b>27</b>	<b>67</b>	<b>115</b>	<b>140</b>	<b>172</b>	<b>198</b>	<b>207</b>	<b>9.5%</b>	<b>5.6%</b>	<b>2.0%</b>	<b>2.1%</b>	<b>1.5%</b>	<b>0.4%</b>
<b>Other Energy Transformation &amp; Losses</b>	<b>5</b>	<b>18</b>	<b>16</b>	<b>15</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>12.5%</b>	<b>-1.1%</b>	<b>-0.1%</b>	<b>-1.1%</b>	<b>0.9%</b>	<b>0.6%</b>
<b>Final consumption</b>	<b>71</b>	<b>135</b>	<b>169</b>	<b>200</b>	<b>204</b>	<b>207</b>	<b>169</b>	<b>6.7%</b>	<b>2.3%</b>	<b>1.7%</b>	<b>0.2%</b>	<b>0.2%</b>	<b>-2.0%</b>
Steel, Non-Met. Minerals and Chem.	13	25	32	38	30	32	26	6.5%	2.7%	1.5%	-2.1%	0.6%	-2.3%
Other Industry	11	21	24	30	34	35	30	7.2%	1.1%	2.2%	1.5%	0.3%	-1.8%
Non-Energy Use	7	25	38	48	45	43	30	14.0%	4.4%	2.2%	-0.6%	-0.6%	-3.6%
Residential	14	15	20	21	20	19	15	0.7%	2.9%	0.2%	-0.3%	-0.7%	-2.2%
Services	10	18	21	26	33	37	37	6.4%	1.6%	2.0%	2.6%	1.1%	0.0%
Agriculture	2	4	3	3	4	4	5	8.1%	-1.8%	0.6%	1.5%	1.1%	0.9%
Road	11	22	28	33	35	34	26	7.7%	2.5%	1.6%	0.4%	-0.1%	-2.7%
Rail	0	0	0	0	0	0	0	2.9%	-2.7%	0.1%	1.4%	0.7%	0.1%
Aviation	2	3	1	2	2	2	1	3.9%	-11.6%	7.3%	0.8%	-0.1%	-3.2%
Other Transport	2	1	1	0	0	0	0	-1.4%	-6.1%	-10.4%	0.1%	-2.5%	-3.9%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%



<b>Korea (Rep.)</b>	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>12</b>	<b>37</b>	<b>75</b>	<b>74</b>	<b>54</b>	<b>41</b>	<b>37</b>	<b>11.7%</b>	<b>7.2%</b>	<b>-0.1%</b>	<b>-3.2%</b>	<b>-2.8%</b>	<b>-1.0%</b>
Coal	6	24	52	47	21	16	16	15.2%	8.1%	-1.1%	-7.6%	-2.8%	0.1%
Oil	5	8	5	5	4	4	2	5.4%	-4.7%	1.2%	-1.9%	0.0%	-8.5%
Gas	2	6	18	21	26	18	16	10.9%	12.0%	1.8%	2.2%	-3.7%	-1.2%
Biomass & Waste	0	0	0	1	2	2	3	n.s.	34.9%	10.4%	5.3%	0.6%	3.3%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>105</b>	<b>290</b>	<b>499</b>	<b>622</b>	<b>781</b>	<b>921</b>	<b>998</b>	<b>10.7%</b>	<b>5.6%</b>	<b>2.2%</b>	<b>2.3%</b>	<b>1.7%</b>	<b>0.8%</b>
Coal	18	111	219	216	101	77	77	20.2%	7.0%	-0.2%	-7.3%	-2.7%	0.1%
of which CCS	0	0	0	0	11	48	75	n.s.	n.s.	n.s.	n.s.	16.3%	4.5%
Oil	19	35	19	23	19	19	8	6.3%	-5.8%	1.8%	-1.9%	0.0%	-8.3%
Gas	10	29	103	106	134	95	98	11.9%	13.4%	0.2%	2.4%	-3.4%	0.3%
of which CCS	0	0	0	0	4	23	54	n.s.	n.s.	n.s.	n.s.	17.9%	8.9%
Biomass & Waste	0	0	1	3	5	6	11	n.s.	28.1%	10.3%	5.3%	2.8%	5.3%
of which CCS	0	0	0	0	0	1	5	n.s.	n.s.	n.s.	n.s.	n.s.	16.3%
Nuclear	53	109	149	241	433	569	595	7.5%	3.2%	4.9%	6.0%	2.8%	0.5%
Hydro	6	6	6	9	9	9	9	-1.2%	1.4%	2.9%	0.6%	0.2%	0.1%
Wind	0	0	1	17	63	105	110	n.s.	48.1%	34.7%	14.1%	5.3%	0.4%
Solar	0	0	1	9	17	40	86	17.5%	n.s.	28.2%	6.4%	8.8%	7.9%
Other	0	0	0	0	0	1	3	n.s.	n.s.	n.s.	30.4%	15.0%	16.4%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>20</b>	<b>49</b>	<b>77</b>	<b>137</b>	<b>196</b>	<b>213</b>	<b>249</b>	<b>9.4%</b>	<b>4.6%</b>	<b>5.9%</b>	<b>3.7%</b>	<b>0.8%</b>	<b>1.6%</b>
Coal	4	14	28	36	34	15	12	14.3%	7.1%	2.4%	-0.4%	-7.9%	-2.0%
of which CCS	0	0	0	0	1	7	12	n.s.	n.s.	n.s.	n.s.	18.1%	4.6%
Oil	4	4	4	6	6	6	7	2.1%	0.0%	2.8%	0.4%	0.5%	0.8%
Gas	3	13	20	41	53	36	38	17.5%	4.6%	7.6%	2.5%	-3.7%	0.4%
of which CCS	0	0	0	0	1	3	8	n.s.	n.s.	n.s.	n.s.	19.5%	8.6%
Biomass & Waste	0	1	0	1	1	1	2	n.s.	-12.0%	22.9%	-1.9%	0.7%	3.1%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	15.9%
Nuclear	8	14	18	32	56	72	74	6.1%	2.6%	5.9%	5.9%	2.7%	0.2%
Hydro	2	3	6	7	7	7	8	3.0%	5.8%	2.2%	0.5%	0.2%	0.1%
Wind	0	0	0	7	26	44	44	n.s.	40.3%	34.0%	13.9%	5.2%	0.1%
Solar	0	0	1	7	13	30	65	n.s.	n.s.	26.8%	6.4%	8.8%	7.9%
Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	29.8%	14.5%	15.9%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>71</b>	<b>135</b>	<b>169</b>	<b>200</b>	<b>204</b>	<b>207</b>	<b>169</b>	<b>6.7%</b>	<b>2.3%</b>	<b>1.7%</b>	<b>0.2%</b>	<b>0.2%</b>	<b>-2.0%</b>
Coal	16	15	18	23	15	12	6	-0.5%	1.9%	2.4%	-4.0%	-2.1%	-7.2%
Oil	44	80	82	92	83	71	44	6.2%	0.2%	1.2%	-1.1%	-1.5%	-4.7%
Gas	1	11	21	24	33	38	25	32.1%	6.5%	1.6%	3.2%	1.4%	-4.1%
Electricity	8	23	39	48	61	72	78	10.8%	5.5%	2.3%	2.3%	1.7%	0.8%
Heat	0	3	4	5	5	6	8	n.s.	2.8%	0.5%	0.4%	1.7%	2.8%
Biomass & Other	3	3	6	8	8	9	9	2.1%	6.4%	2.9%	0.0%	1.3%	0.5%
Share of Renewables <sup>3</sup> (%)	5%	3%	5%	7%	10%	16%	27%	-3.3%	3.9%	3.3%	4.1%	4.3%	5.3%
<b>Industry (incl. non-energy use)</b>	<b>31</b>	<b>71</b>	<b>94</b>	<b>115</b>	<b>110</b>	<b>110</b>	<b>85</b>	<b>8.8%</b>	<b>2.9%</b>	<b>2.0%</b>	<b>-0.4%</b>	<b>0.0%</b>	<b>-2.6%</b>
Coal	7	14	17	22	15	12	6	8.1%	1.7%	2.7%	-3.8%	-2.1%	-7.2%
Oil	18	36	44	50	44	38	27	7.4%	2.0%	1.4%	-1.4%	-1.4%	-3.4%
Gas	0	3	7	11	19	25	18	44.4%	9.4%	4.3%	5.7%	2.9%	-3.2%
Electricity	5	13	20	24	27	30	31	10.0%	4.3%	2.2%	0.9%	1.3%	0.1%
Heat	0	2	2	2	2	2	2	n.s.	1.0%	-2.0%	-0.2%	-0.3%	-0.2%
Biomass & Other	1	3	5	6	4	3	2	8.2%	5.1%	2.0%	-3.2%	-2.4%	-7.0%
<b>Buildings</b>	<b>24</b>	<b>33</b>	<b>41</b>	<b>46</b>	<b>53</b>	<b>56</b>	<b>52</b>	<b>3.3%</b>	<b>2.2%</b>	<b>1.2%</b>	<b>1.4%</b>	<b>0.5%</b>	<b>-0.7%</b>
Coal	9	1	1	1	0	0	0	-24.1%	4.5%	-3.1%	-14.7%	-16.0%	-16.2%
Oil	10	14	7	7	6	4	2	3.3%	-6.7%	-0.5%	-1.8%	-2.3%	-7.2%
Gas	1	8	12	12	13	11	5	29.6%	4.5%	-0.2%	0.2%	-1.7%	-7.6%
Electricity	3	9	18	22	31	36	39	11.9%	7.1%	2.2%	3.1%	1.6%	0.9%
Heat	0	1	2	3	3	4	6	n.s.	5.5%	2.7%	0.8%	2.9%	4.0%
Biomass & Other	1	0	1	2	2	2	1	-11.3%	10.2%	5.8%	-0.2%	-1.8%	-9.7%
<b>Agriculture</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>8.1%</b>	<b>-1.8%</b>	<b>0.6%</b>	<b>1.5%</b>	<b>1.1%</b>	<b>0.9%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	2	3	2	2	1	1	1	7.5%	-3.7%	-1.4%	-3.5%	-4.3%	-4.5%
Gas	0	0	0	0	0	0	0	n.s.	-9.6%	2.9%	-2.3%	-2.9%	-3.2%
Electricity	0	0	1	1	2	3	3	13.8%	6.6%	4.0%	4.7%	2.9%	1.9%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	19.9%	5.0%	2.3%
<b>Transport</b>	<b>15</b>	<b>27</b>	<b>30</b>	<b>36</b>	<b>37</b>	<b>37</b>	<b>28</b>	<b>6.3%</b>	<b>1.2%</b>	<b>1.6%</b>	<b>0.4%</b>	<b>-0.1%</b>	<b>-2.7%</b>
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	15	27	29	34	32	28	14	6.3%	0.7%	1.6%	-0.5%	-1.4%	-6.3%
Gas	0	0	1	1	2	2	2	n.s.	n.s.	0.5%	4.3%	2.9%	-0.8%
Electricity	0	0	0	0	2	3	5	7.2%	0.7%	4.5%	18.6%	6.5%	4.6%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	2	4	7	n.s.	n.s.	2.6%	15.5%	8.5%	6.0%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>5</b>	<b>18</b>	<b>16</b>	<b>15</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>12.5%</b>	<b>-1.1%</b>	<b>-0.1%</b>	<b>-1.1%</b>	<b>0.9%</b>	<b>0.6%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences



New Zealand	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	3	4	4	5	5	5	6	1.3%	1.3%	0.8%	0.8%	0.6%	0.4%
GDP per capita (ppp, k\$'05)	19	23	25	30	34	39	45	1.7%	1.1%	1.6%	1.4%	1.4%	1.5%
GDP per capita (mer, k\$'05)	21	24	28	33	38	43	50	1.7%	1.3%	1.7%	1.4%	1.4%	1.5%
Share Value Added - Agriculture (%)	5	4	2	2	2	2	2	-1.8%	-6.8%	-0.4%	-0.7%	-0.6%	-0.5%
Share Value Added - Industry (%)	31	27	27	27	26	24	23	-1.4%	0.1%	0.0%	-0.4%	-0.5%	-0.6%
Share Value Added - Services (%)	64	69	71	71	72	74	75	0.8%	0.3%	0.0%	0.2%	0.2%	0.2%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	18	21	26	-7.8%	10.3%	-2.2%	1.3%	1.2%	2.4%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	28	24	47	43	46	38	32	-1.2%	6.8%	-0.9%	0.8%	-2.0%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	24	41	43	48	26	13	-8	5.6%	0.6%	1.1%	-5.9%	-6.8%	n.s.
Total GHG (excl. sinks)	61	73	75	74	60	48	30	1.9%	0.2%	-0.1%	-2.1%	-2.2%	-4.7%
Total GHG (energy, industry, agriculture)	61	73	75	74	60	48	26	1.9%	0.2%	-0.1%	-2.1%	-2.2%	-5.8%
CO <sub>2</sub>	25	34	35	37	29	22	4	2.9%	0.4%	0.6%	-2.6%	-2.7%	-15.2%
CH <sub>4</sub>	27	29	28	25	22	17	13	1.0%	-0.3%	-1.1%	-1.6%	-2.3%	-2.4%
N <sub>2</sub> O	8	10	10	10	9	8	7	1.7%	0.6%	-0.1%	-1.2%	-1.2%	-1.2%
F gases	1	0	1	2	1	1	2	-6.7%	13.5%	3.3%	-3.6%	1.8%	1.6%
Total GHG from Energy and Industry	30	39	41	42	32	25	7	2.6%	0.5%	0.2%	-2.8%	-2.5%	-12.1%
CO <sub>2</sub> Emissions from Fuel Comb.	24	32	32	34	26	20	3	3.0%	0.1%	0.5%	-2.7%	-2.7%	-16.2%
Power generation/District heating	4	6	6	3	1	0	-2	5.1%	0.2%	-6.8%	-9.1%	-15.4%	n.s.
Industry	7	9	7	12	9	7	1	1.9%	-2.0%	4.8%	-2.3%	-2.4%	-16.0%
Buildings	1	1	1	1	1	1	0	0.7%	-0.2%	-2.2%	0.5%	-0.8%	-9.8%
Agriculture	1	2	1	2	1	1	0	2.2%	-0.6%	1.1%	-3.9%	-4.3%	-4.3%
Transport	9	12	14	14	11	9	4	3.4%	1.3%	0.2%	-2.2%	-2.3%	-7.7%
Other	1	2	2	2	2	1	0	2.4%	1.3%	1.2%	-2.2%	-2.3%	n.s.
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	3	8	n.s.	n.s.	n.s.	38.8%	22.2%	10.7%
Coal	0	0	0	0	0	1	1	n.s.	n.s.	n.s.	23.2%	17.2%	2.8%
Gas	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	17.3%	3.5%
Biomass	0	0	0	0	0	1	5	n.s.	n.s.	n.s.	n.s.	41.0%	17.0%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	13	15	19	23	22	22	24	1.8%	2.0%	2.4%	-0.7%	-0.1%	0.9%
Coal	1	2	3	3	3	2	2	4.5%	3.8%	0.4%	-2.4%	-1.8%	-1.5%
Oil	3	2	3	4	2	1	0	-2.7%	3.2%	4.3%	-5.6%	-12.3%	-17.3%
Natural gas	4	5	4	4	3	3	2	2.5%	-2.6%	-0.9%	-1.2%	-2.3%	-2.2%
Biomass	1	1	1	1	2	3	5	4.0%	0.7%	1.8%	2.8%	4.4%	5.2%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	5.7%	17.7%
Hydro	2	2	2	2	2	2	2	0.5%	0.1%	-0.3%	0.7%	0.0%	0.3%
Other renewables	2	3	5	9	9	11	12	3.2%	7.4%	5.3%	0.9%	1.5%	1.2%
Net Imports	1	3	1	1	2	4	1						
Coal	0	-1	-2	-2	-2	-2	-2						
Oil	2	4	3	3	3	4	2						
Natural gas	-1	0	0	1	1	2	0						
Biomass	0	0	0	0	0	0	0						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	13	18	20	25	24	25	24	2.9%	1.1%	2.2%	-0.4%	0.6%	-0.3%
Coal	1	1	2	2	1	0	0	-0.3%	2.4%	0.0%	-9.0%	-4.9%	-9.3%
Oil	4	6	6	7	5	4	2	2.7%	0.7%	1.0%	-2.3%	-1.9%	-6.2%
Natural gas	3	5	4	4	4	4	2	5.0%	-3.0%	1.6%	-0.1%	0.1%	-5.8%
Biomass	1	1	1	1	2	3	5	4.0%	0.7%	1.0%	3.0%	4.4%	5.5%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	5.7%	17.7%
Hydro	2	2	2	2	2	2	2	0.5%	0.1%	-0.3%	0.7%	0.0%	0.3%
Other renewables	2	3	5	9	9	11	12	3.2%	7.4%	5.3%	0.9%	1.5%	1.2%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	13	18	20	25	24	25	24	2.9%	1.1%	2.2%	-0.4%	0.6%	-0.3%
Energy for Power Generation	6	7	10	13	13	15	17	2.8%	3.4%	2.1%	0.4%	1.6%	1.3%
Other Energy Transformation & Losses	0	0	0	0	0	0	1	0.5%	-8.2%	8.6%	-1.8%	3.1%	6.3%
Final consumption	10	13	13	15	14	14	12	2.8%	-0.1%	1.7%	-0.6%	-0.1%	-1.7%
Steel, Non-Met. Minerals and Chem.	1	1	1	2	1	1	1	0.4%	-2.5%	4.1%	-2.8%	-1.8%	-4.3%
Other Industry	3	3	3	4	4	4	4	2.1%	0.3%	2.3%	0.0%	0.5%	-1.1%
Non-Energy Use	1	2	1	2	2	2	1	10.3%	-5.8%	7.3%	-1.3%	-0.6%	-3.2%
Residential	1	1	2	1	1	1	2	1.1%	1.0%	-1.0%	0.2%	0.8%	0.2%
Services	1	1	1	1	1	1	2	1.7%	2.0%	-0.2%	0.9%	1.1%	0.8%
Agriculture	0	1	1	1	1	1	1	2.8%	0.3%	1.5%	0.8%	0.7%	0.6%
Road	3	3	4	4	4	3	2	3.0%	1.7%	0.4%	-1.4%	-1.2%	-4.1%
Rail	0	0	0	0	0	0	0	10.4%	-4.9%	0.9%	0.0%	-0.3%	-0.4%
Aviation	0	0	0	0	0	0	0	2.4%	-1.6%	-1.3%	0.7%	0.6%	-1.8%
Other Transport	0	0	0	0	0	0	0	4.7%	-3.9%	2.1%	-0.4%	-2.3%	-2.9%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

New Zealand	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4.4%</b>	<b>0.9%</b>	<b>-4.5%</b>	<b>-2.4%</b>	<b>4.4%</b>	<b>2.3%</b>
Coal	0	0	0	0	0	0	0	8.2%	2.7%	-1.3%	-16.0%	0.6%	0.1%
Oil	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-13.1%	2.6%	n.s.
Gas	1	2	2	1	0	1	1	4.3%	-0.7%	-11.4%	-1.4%	5.9%	-0.9%
Biomass & Waste	0	0	0	0	0	0	0	1.3%	0.2%	-11.4%	-0.5%	22.5%	10.1%
Other	0	0	1	1	1	1	1	3.2%	7.2%	4.8%	0.5%	1.3%	0.9%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	<b>32</b>	<b>39</b>	<b>44</b>	<b>45</b>	<b>50</b>	<b>58</b>	<b>67</b>	<b>2.0%</b>	<b>1.2%</b>	<b>0.2%</b>	<b>1.0%</b>	<b>1.5%</b>	<b>1.5%</b>
Coal	1	2	2	2	0	0	0	8.8%	2.9%	-1.3%	-15.0%	0.8%	0.2%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	16.3%	2.8%
Oil	0	0	0	0	0	0	0	n.s.	n.s.	44.9%	-13.0%	2.5%	n.s.
Gas	6	10	10	3	3	5	5	5.3%	0.4%	-11.5%	-0.8%	6.1%	-0.7%
of which CCS	0	0	0	0	0	3	3	n.s.	n.s.	n.s.	n.s.	17.8%	2.4%
Biomass & Waste	1	1	1	0	0	2	4	1.6%	0.2%	-11.1%	1.0%	22.8%	10.6%
of which CCS	0	0	0	0	0	1	4	n.s.	n.s.	n.s.	n.s.	n.s.	13.7%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	23	24	25	24	26	26	27	0.5%	0.1%	-0.3%	0.7%	0.0%	0.3%
Wind	0	0	1	7	10	13	16	n.s.	25.4%	19.0%	4.7%	1.9%	2.1%
Solar	0	0	0	0	1	1	3	n.s.	n.s.	45.9%	14.3%	10.0%	8.1%
Other	2	3	6	9	10	11	13	3.2%	7.2%	4.8%	0.5%	1.4%	1.1%
<b>Generation Capacity (GW<sub>e</sub>)</b>	<b>7</b>	<b>8</b>	<b>10</b>	<b>13</b>	<b>17</b>	<b>20</b>	<b>24</b>	<b>0.8%</b>	<b>1.9%</b>	<b>3.2%</b>	<b>2.8%</b>	<b>1.2%</b>	<b>2.2%</b>
Coal	1	1	1	0	0	0	0	-1.0%	-4.8%	-1.5%	-7.1%	0.1%	-8.7%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	17.5%	4.4%
Oil	0	0	0	0	0	0	0	n.s.	n.s.	-0.2%	1.6%	-0.4%	2.0%
Gas	1	1	2	2	3	2	2	2.7%	4.4%	-0.2%	2.5%	-2.7%	-1.5%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	19.5%	5.4%
Biomass & Waste	0	0	0	0	0	1	1	0.9%	8.9%	0.6%	5.3%	3.1%	6.2%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	14.0%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	5	5	5	5	6	6	6	0.9%	0.1%	0.1%	0.7%	0.0%	0.3%
Wind	0	0	1	3	4	5	6	n.s.	30.8%	17.0%	4.9%	2.0%	2.3%
Solar	0	0	0	0	1	2	4	n.s.	n.s.	47.7%	15.4%	10.1%	8.4%
Other	0	0	1	2	3	4	4	3.4%	7.1%	11.6%	4.1%	1.5%	1.8%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	<b>10</b>	<b>13</b>	<b>13</b>	<b>15</b>	<b>14</b>	<b>14</b>	<b>12</b>	<b>2.8%</b>	<b>-0.1%</b>	<b>1.7%</b>	<b>-0.6%</b>	<b>-0.1%</b>	<b>-1.7%</b>
Coal	1	1	1	1	1	0	0	-2.3%	1.9%	0.9%	-6.0%	-4.3%	-7.5%
Oil	4	5	6	6	5	4	2	2.8%	1.0%	0.5%	-2.3%	-1.9%	-6.3%
Gas	2	3	2	3	3	3	1	5.3%	-5.4%	7.2%	0.0%	-1.1%	-8.8%
Electricity	2	3	3	3	4	4	5	2.0%	1.3%	0.3%	1.0%	1.5%	1.5%
Heat	0	0	0	0	0	0	0	1.4%	1.6%	-0.1%	0.2%	0.7%	4.7%
Biomass & Other	1	1	1	1	2	2	3	4.5%	0.7%	1.6%	2.8%	2.9%	3.7%
Share of Renewables <sup>3</sup> (%)	29%	28%	29%	32%	45%	57%	91%	-0.4%	0.6%	1.0%	3.4%	2.4%	4.6%
<b>Industry (incl. non-energy use)</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>6</b>	<b>3.2%</b>	<b>-1.7%</b>	<b>3.7%</b>	<b>-0.8%</b>	<b>-0.2%</b>	<b>-1.9%</b>
Coal	1	1	1	1	0	0	0	-2.0%	2.1%	1.3%	-5.8%	-4.2%	-7.5%
Oil	1	1	1	1	1	1	1	1.0%	1.0%	2.5%	-0.6%	1.2%	-2.1%
Gas	2	3	1	3	3	3	1	5.8%	-6.1%	8.4%	-0.9%	-1.5%	-10.0%
Electricity	1	1	1	1	1	2	2	2.3%	0.0%	1.1%	0.7%	1.3%	0.9%
Heat	0	0	0	0	0	0	0	2.1%	0.7%	0.0%	-0.2%	-0.3%	-0.2%
Biomass & Other	0	1	1	1	1	1	2	5.6%	0.9%	0.7%	0.2%	1.7%	4.7%
<b>Buildings</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>1.4%</b>	<b>1.5%</b>	<b>-0.6%</b>	<b>0.6%</b>	<b>0.9%</b>	<b>0.5%</b>
Coal	0	0	0	0	0	0	0	-5.8%	-4.0%	-5.7%	-15.8%	n.s.	n.s.
Oil	0	0	0	0	0	0	0	0.6%	1.7%	-0.4%	-1.0%	-1.4%	-10.1%
Gas	0	0	0	0	0	0	0	5.6%	-0.5%	-3.2%	3.6%	0.0%	-9.6%
Electricity	1	2	2	2	2	2	2	1.5%	2.0%	-0.5%	-0.1%	0.8%	1.3%
Heat	0	0	0	0	0	0	0	-0.4%	3.8%	-0.4%	1.0%	2.3%	9.4%
Biomass & Other	0	0	0	0	0	0	0	0.1%	-0.5%	2.1%	4.6%	3.3%	0.0%
<b>Agriculture</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2.8%</b>	<b>0.3%</b>	<b>1.5%</b>	<b>0.8%</b>	<b>0.7%</b>	<b>0.6%</b>
Coal	0	0	0	0	0	0	0	4.6%	12.4%	-1.9%	-6.9%	-7.5%	-7.5%
Oil	0	0	0	0	0	0	0	2.3%	-1.4%	1.5%	-3.8%	-4.2%	-4.2%
Gas	0	0	0	0	0	0	0	0.5%	-3.5%	0.7%	-2.6%	-2.9%	-2.9%
Electricity	0	0	0	0	0	0	0	6.6%	4.2%	1.5%	3.1%	2.3%	1.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	24.3%	4.9%	2.1%
<b>Transport</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>3.1%</b>	<b>1.2%</b>	<b>0.3%</b>	<b>-1.1%</b>	<b>-1.1%</b>	<b>-3.8%</b>
Coal	0	0	0	0	0	0	0	0.0%	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	3	4	5	5	4	3	1	3.3%	1.2%	0.1%	-2.6%	-2.6%	-8.4%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	16.8%	2.4%	-2.0%
Electricity	0	0	0	0	0	0	1	1.8%	-1.1%	18.1%	24.8%	6.2%	3.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	1	n.s.	n.s.	31.6%	10.9%	6.4%	5.3%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0.5%</b>	<b>-8.2%</b>	<b>8.6%</b>	<b>-1.8%</b>	<b>3.1%</b>	<b>6.3%</b>

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

Rest Pacific	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Main Economic Indicators</b>													
Population (Million)	6	8	9	11	13	15	17	2.3%	2.0%	1.8%	1.6%	1.4%	1.1%
GDP per capita (ppp, k\$'05)	2	2	2	3	4	6	9	1.2%	1.1%	3.1%	2.7%	3.9%	4.3%
GDP per capita (mer, k\$'05)	1	1	1	2	2	3	5	1.0%	1.0%	3.1%	2.7%	3.9%	4.3%
Share Value Added - Agriculture (%)	5	4	2	1	0	0	0	-1.8%	-6.8%	-10.3%	-10.0%	-10.7%	-7.9%
Share Value Added - Industry (%)	31	27	27	28	28	27	27	-1.4%	0.1%	0.4%	0.0%	-0.1%	-0.3%
Share Value Added - Services (%)	64	69	71	71	72	72	73	0.8%	0.3%	0.1%	0.1%	0.1%	0.1%
<b>Prices</b>													
<b>International/Regional (\$'05/boe)</b>													
Coal	17	7	20	16	18	21	26	-7.8%	10.3%	-2.2%	1.3%	1.2%	2.4%
Oil	33	32	72	66	95	83	90	-0.2%	8.4%	-0.8%	3.6%	-1.3%	0.8%
Gas	28	24	47	43	46	38	32	-1.2%	6.8%	-0.9%	0.8%	-2.0%	-1.6%
<b>GHG emissions (Mt CO<sub>2</sub> eq.)</b>													
Total GHG	110	96	102	119	107	77	55	-1.4%	0.6%	1.6%	-1.1%	-3.2%	-3.4%
Total GHG (excl. sinks)	110	96	102	119	107	84	75	-1.4%	0.6%	1.6%	-1.1%	-2.4%	-1.2%
Total GHG (energy, industry, agriculture)	21	13	17	26	32	30	10	-5.1%	2.8%	4.6%	2.1%	-0.6%	-10.8%
CO <sub>2</sub>	12	5	8	16	24	24	4	-8.8%	5.5%	7.5%	3.8%	-0.1%	-16.5%
CH <sub>4</sub>	5	4	5	5	4	3	2	-0.7%	0.6%	0.6%	-1.7%	-3.3%	-2.3%
N <sub>2</sub> O	5	4	4	5	4	4	3	-3.0%	0.7%	1.8%	-1.4%	-1.6%	-1.3%
F gases	0	0	0	0	0	0	0	n.s.	n.s.	5.0%	-1.4%	4.5%	5.5%
Total GHG from Energy and Industry	14	7	10	19	26	25	5	-7.0%	4.7%	6.1%	3.1%	-0.3%	-14.7%
CO <sub>2</sub> Emissions from Fuel Comb.	12	4	7	15	22	22	3	-9.5%	5.1%	7.8%	3.8%	0.0%	-18.2%
Power generation/District heating	1	1	2	3	4	2	-4	6.3%	2.3%	5.7%	2.5%	-7.2%	n.s.
Industry	1	1	3	5	7	7	0	6.7%	10.0%	7.6%	2.5%	0.4%	n.s.
Buildings	0	0	0	0	1	0	0	-5.2%	-2.2%	8.1%	4.1%	-0.7%	-8.3%
Agriculture	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Transport	1	2	2	3	3	4	3	2.1%	2.5%	3.3%	1.4%	1.6%	-1.8%
Other	8	0	0	3	7	8	4	-45.9%	35.9%	22.8%	8.3%	1.8%	-6.6%
CO <sub>2</sub> captured (CCS)	0	0	0	0	0	3	14	n.s.	n.s.	n.s.	n.s.	52.5%	17.5%
Coal	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	33.2%	4.7%
Gas	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	50.1%	7.3%
Biomass	0	0	0	0	0	2	12	n.s.	n.s.	n.s.	n.s.	n.s.	20.6%
<b>Energy Balance, by fuel (Mtoe)</b>													
Primary Production	6	6	3	6	7	9	14	-1.2%	-7.3%	8.3%	1.2%	2.6%	5.3%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	4	4	0	0	1	1	1	-2.1%	-21.0%	3.7%	4.6%	3.3%	2.7%
Natural gas	0	0	0	0	0	0	0	6.2%	0.0%	-0.7%	0.3%	0.2%	0.1%
Biomass	2	2	2	4	4	5	11	0.2%	-0.1%	9.6%	-0.2%	2.2%	7.1%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	17.0%
Hydro	0	0	0	0	0	0	0	0.6%	0.4%	n.s.	n.s.	n.s.	n.s.
Other renewables	0	0	0	1	1	2	2	n.s.	n.s.	10.7%	5.1%	3.8%	0.5%
Net Imports	-1	-2	2	2	4	5	1						
Coal	0	0	0	1	2	2	2						
Oil	-1	-2	2	3	2	2	0						
Natural gas	0	0	0	1	2	3	2						
Biomass	0	0	0	-2	-2	-2	-3						
Biofuels	0	0	0	0	0	0	0						
Electricity	0	0	0	0	0	0	0						
Primary Energy Demand <sup>2</sup>	6	3	5	8	11	14	16	-5.0%	3.1%	5.3%	3.3%	2.4%	1.4%
Coal	0	0	0	1	2	2	2	n.s.	n.s.	n.s.	11.3%	2.5%	-3.8%
Oil	4	1	2	3	3	3	2	-9.4%	3.1%	5.6%	-0.5%	-1.4%	-3.6%
Natural gas	0	0	1	1	2	3	2	6.1%	19.5%	7.4%	7.7%	3.6%	-3.1%
Biomass	2	2	2	2	2	3	8	0.2%	-0.1%	1.1%	1.1%	4.6%	8.5%
Nuclear <sup>1</sup>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	17.0%
Hydro	0	0	0	0	0	0	0	0.6%	0.4%	n.s.	n.s.	n.s.	n.s.
Other renewables	0	0	0	1	1	2	2	n.s.	n.s.	10.7%	5.1%	3.8%	0.5%
<b>Primary Energy Demand, by sector (Mtoe)</b>													
Primary Energy Demand	6	3	5	8	11	14	16	-5.0%	3.1%	5.3%	3.3%	2.4%	1.4%
Energy for Power Generation	0	1	1	2	3	4	5	4.9%	5.5%	6.5%	3.9%	3.6%	2.7%
Other Energy Transformation & Losses	3	0	0	1	2	2	3	n.s.	n.s.	24.5%	8.7%	2.8%	1.8%
Final consumption	3	3	4	5	7	8	10	0.9%	2.3%	3.6%	2.2%	2.3%	1.3%
Steel, Non-Met. Minerals and Chem.	0	0	0	0	1	1	1	n.s.	n.s.	3.7%	3.3%	0.9%	-0.7%
Other Industry	1	1	1	2	3	4	5	3.1%	2.2%	6.5%	3.0%	3.4%	2.3%
Non-Energy Use	0	0	0	0	0	0	0	n.s.	n.s.	6.1%	3.9%	3.3%	1.6%
Residential	1	1	1	2	2	2	2	-0.2%	0.1%	0.8%	0.4%	0.0%	-0.8%
Services	0	0	0	0	0	0	1	2.8%	3.5%	3.9%	4.0%	4.5%	4.6%
Agriculture	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Road	0	1	1	1	1	1	1	2.2%	0.9%	2.8%	1.4%	1.6%	0.3%
Rail	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Aviation	0	0	0	0	0	0	1	1.4%	2.8%	6.5%	4.2%	4.2%	2.1%
Other Transport	0	0	0	0	0	0	0	0.0%	0.0%	2.3%	2.7%	1.3%	0.2%

<sup>1</sup> Primary energy from nuclear is calculated considering the primary heat equivalent of the electricity produced with an average efficiency of 33%

Rest Pacific	1990	2000	2010	2020	2030	2040	2050	'90-'00	'00-'10	'10-'20	'20-'30	'30-'40	'40-'50
<b>Power Generation</b>													
<b>Fuel Inputs Therm. Power (Mtoe)</b>	0	1	1	1	2	2	3	6.3%	2.6%	6.3%	3.0%	3.4%	4.3%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	12.3%	2.9%	-3.4%
Oil	0	0	1	1	1	0	0	6.4%	2.6%	4.2%	-1.9%	-7.4%	-9.4%
Gas	0	0	0	0	1	1	1	6.2%	0.0%	10.5%	10.1%	5.0%	0.4%
Biomass & Waste	0	0	0	0	0	0	1	2	5.4%	-0.1%	12.4%	1.9%	24.5%
Other	0	0	0	0	0	0	0	n.s.	n.s.	10.0%	4.2%	2.7%	-0.4%
<b>Gross Elec. Generation (TWh<sub>e</sub>)</b>	2	3	5	6	10	15	23	3.3%	3.5%	3.1%	4.3%	4.5%	4.3%
Coal	0	0	0	0	1	1	1	n.s.	n.s.	n.s.	12.7%	3.1%	-3.1%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	44.5%	3.7%
Oil	1	2	2	3	3	1	0	6.0%	4.3%	3.9%	-2.0%	-7.5%	-9.4%
Gas	0	0	0	1	4	6	6	5.8%	2.8%	11.5%	10.2%	5.2%	0.6%
of which CCS	0	0	0	0	0	1	2	n.s.	n.s.	n.s.	n.s.	50.4%	5.9%
Biomass & Waste	0	0	0	0	0	0	3	10	1.7%	1.3%	13.1%	3.5%	27.7%
of which CCS	0	0	0	0	0	2	8	n.s.	n.s.	n.s.	n.s.	n.s.	15.7%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	1	1	1	0	0	0	0	0.6%	0.4%	n.s.	n.s.	n.s.	n.s.
Wind	0	0	0	0	1	2	3	n.s.	n.s.	25.4%	11.7%	9.2%	4.3%
Solar	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	16.8%	15.0%	4.1%
Other	0	0	0	1	1	2	2	n.s.	n.s.	10.0%	4.3%	2.9%	1.5%
<b>Generation Capacity (GW<sub>e</sub>)</b>	0	0	1	1	2	4	5	0.7%	4.3%	5.1%	5.5%	5.8%	3.6%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	12.9%	3.6%	-2.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	39.7%	3.7%
Oil	0	0	1	1	0	0	0	-0.3%	3.7%	-0.5%	-0.7%	-3.8%	-5.2%
Gas	0	0	0	0	1	1	1	7.4%	0.0%	15.4%	8.6%	5.2%	0.9%
of which CCS	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	50.6%	5.9%
Biomass & Waste	0	0	0	0	0	0	1	0.0%	9.4%	0.5%	3.5%	27.6%	13.8%
of which CCS	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	n.s.	n.s.	15.6%
Nuclear	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Hydro	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Wind	0	0	0	0	0	1	1	n.s.	n.s.	24.9%	11.4%	9.0%	4.1%
Solar	0	0	0	0	0	0	1	n.s.	n.s.	n.s.	16.6%	14.9%	4.2%
Other	0	0	0	0	0	0	0	0.0%	28.4%	8.1%	3.5%	2.2%	1.9%
<b>Total Final Consumption<sup>2</sup> (Mtoe)</b>	3	3	4	5	7	8	10	0.9%	2.3%	3.6%	2.2%	2.3%	1.3%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	24.9%	9.7%	1.7%	-5.0%
Oil	1	1	1	2	2	2	2	1.8%	2.3%	5.5%	0.0%	0.0%	-3.0%
Gas	0	0	0	1	2	2	1	n.s.	n.s.	6.7%	6.9%	3.0%	-5.9%
Electricity	0	0	0	1	1	1	2	3.8%	3.1%	3.1%	4.3%	4.6%	4.3%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	12.8%	8.0%	1.4%
Biomass & Other	2	2	2	2	2	3	5	0.2%	-0.1%	0.7%	0.5%	2.5%	6.3%
Share of Renewables <sup>3</sup> (%)	65%	60%	49%	37%	35%	43%	79%	-0.7%	-2.0%	-2.7%	-0.7%	2.0%	6.2%
<b>Industry (incl. non-energy use)</b>	1	1	2	3	4	5	6	3.1%	5.9%	5.9%	3.1%	3.0%	1.8%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	24.0%	10.4%	1.9%	-5.0%
Oil	0	0	1	1	1	1	1	8.0%	4.8%	8.1%	-1.0%	-1.6%	-4.1%
Gas	0	0	0	1	2	2	1	n.s.	n.s.	6.1%	6.5%	3.0%	-6.2%
Electricity	0	0	0	0	0	1	1	3.7%	2.4%	3.1%	3.9%	4.3%	4.0%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	1	1	3	0.6%	-0.8%	2.5%	2.9%	7.6%	10.1%
<b>Buildings</b>	2	2	2	2	2	2	2	0.0%	0.3%	1.1%	0.8%	0.7%	0.5%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	-4.9%	n.s.	n.s.
Oil	0	0	0	0	0	0	0	-5.2%	-2.1%	4.6%	1.0%	-2.2%	-9.1%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	11.0%	1.1%	-7.6%
Electricity	0	0	0	0	0	0	1	4.0%	4.4%	3.0%	3.9%	4.4%	4.4%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	12.8%	8.0%	1.4%
Biomass & Other	1	1	1	1	1	1	1	0.1%	0.1%	0.2%	-0.6%	-1.1%	-0.6%
<b>Agriculture</b>	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Electricity	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
<b>Transport</b>	0	1	1	1	1	1	2	2.1%	1.1%	3.4%	2.1%	2.3%	0.8%
Coal	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Oil	0	1	1	1	1	1	1	2.1%	1.1%	3.2%	1.1%	1.4%	-2.0%
Gas	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	21.8%	6.2%	1.7%
Electricity	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	31.9%	8.4%	5.8%
Heat	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Biomass & Other	0	0	0	0	0	0	0	n.s.	n.s.	n.s.	16.4%	9.5%	12.6%
<b>Other Energy Transformation &amp; Losses<sup>4</sup></b>	3	0	0	1	2	2	3	n.s.	n.s.	24.5%	8.7%	2.8%	1.8%

<sup>2</sup> does not include international aviation and maritime bunkers; includes non-energy uses<sup>3</sup> ratio of renewable energy over final energy demand increased by distribution losses and self consumption of electricity and steam plants<sup>4</sup> includes statistical differences

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Stimulating innovation  
Supporting legislation*

